# fmocdmac — FM's OCD LATEX 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

 $1 \langle *package \rangle$ 

## Required external packages:

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

### Package options:

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

<sup>\*</sup>This document describes version v0.24 of the fmocdmac package, last revised 2023/09/18.

```
35 %% Font tools
36 \newif\iffnttls@ \fnttls@true
37 \DeclareOption{nofnttls}{\fnttls@false}
39 %% Camera-ready version
40 \newif\ifcrv@ \crv@false
41 \DeclareOption{crv}{\crv@true}
43 %% Change bars
44 \newif\ifchgbar@ \chgbar@false
45 \DeclareOption{chgbar}{\chgbar@true}
47 %% Line numbers
48 \newif\iflinnum@ \linnum@false
49 \DeclareOption{linnum}{\linnum@true}
51
52 %% Text macro generation
53 \newif\iftxtgen@ \txtgen@false
54 \DeclareOption{txtgen}{\txtgen@true}
55 \DeclareOption{notxtgen}
    {\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}
    {\mthgen@false\mth@false\gam@false\log@false\aut@false}
63
65 %% Elementary macros for text
66 \newif\iftxt@ \txt@false
67 \DeclareOption{txt}{\txt@true\txtgen@true}
68 \label{lem:continuity} $$ \operatorname{DeclareOption}_{notxt}_{\text{txt@false}} $$
69
70 %% Elementary macros for math
71 \newif\ifmth@ \mth@false
72 \DeclareOption{mth}{\mth@true\mthgen@true}
73 \DeclareOption{nomth}{\mth@false}
76 %% Macros for computational-complexity classes
77 \newif\ifcom@ \com@false
78 \DeclareOption{com}{\com@true\txtgen@true}
79 \DeclareOption{nocom}{\com@false}
82 %% Macros for graphs
83 \newif\ifgrp@ \grp@false
84 \end{true} txtgen@true \end{true}
85 \DeclareOption{nogrp}{\grp@false}
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}
97 %% Macros for automata
```

```
99 \DeclareOption{aut}{\aut@true\txtgen@true\mthgen@true}
                         100 \DeclareOption{noaut}{\aut@false}
                        102
                        103 %% Format-related tricks
                         104 \newif\iffrm@ \frm@false
                         105 \DeclareOption{frm}{\frm@true}
                         106 \DeclareOption{nofrm}{\frm@false}
                         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}
                        124
                         125 %% Algorithm-related tricks
                         126 \newif\ifalg@ \alg@false
                         127 \DeclareOption{alg}{\alg@true}
                         128 \DeclareOption{noalg}{\alg@false}
                       Option-processing code:
                         131 \ensuremath{\mbox{\mbox{$131$ \colored{\mbox{\mbox{\mbox{\mbox{$131$ \colored{\mbox{\mbox{$131$ \colored{\mbox{$131$ \colored{\mb
                         133 \ExecuteOptions{aux,txtgen,mthgen,txt,mth,com,grp,gam,log,aut}%
                         135 \ProcessOptions\relax%
                         137 \ifcsdef{if@twocolumn}{}{\newif\if@twocolumn}
                       Package main body:
                         \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{warKappa}{K} \csdef{Mu}{M} \csdef{Nu}{N} \csdef{Omicron}{0}
                         147 \csdef\{Rho\}\{P\} \csdef\{VarRho\}\{P\} \csdef\{Tau\}\{T\} \csdef\{Chi\}\{X\}\}
```

98 \newif\ifaut@ \aut@false

```
• \empchk{}{B} = ""
              • \empchk{A}{B} = "B"
           152 \DeclareRobustCommand{\empchk}[2]
                 {\left\{ if \&#1\& else#2\right\} }
          Default value: \langle A \rangle = \langle A \rangle = \langle A \rangle evaluates to Argument \langle A \rangle, if Argument \langle A \rangle is empty, and to
\defval
          Argument \langle A \rangle itself, otherwise.
              • \defval{}{B} = "B"
              • \defval{A}{B} = "A"
            154 \newcommand{\defval}[2]
                 {\left\{ if \&#1\&#2\right\} }
           \arglef Left extension: \arglef{\langle A \rangle}{\langle B \rangle} 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 \DeclareRobustCommand{\arglef}[2]
                 {\empchk{#2}{#1#2}}
\argrig Right extension: \argrig{\langle A\rangle} \{\langle B\rangle}$ 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 \DeclareRobustCommand{\argrig}[2]
                 {\empchk{#1}{#1#2}}
\argmid Middle extension: \argmid{\langle A\rangle} \{\langle B\rangle} \{\langle C\rangle}$ 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 \DeclareRobustCommand{\argmid}[3]
                 {\empchk{#2}{#1#2#3}}
\argsep
          Separators: \argsep\{\langle A \rangle\}\{\langle B \rangle\}\{\langle C \rangle\} 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 \DeclareRobustCommand{\argsep}[3]
                 {\left. \frac{4}{k}1\&#3\right.} 
           Variadic commands: \operatorname{Varcmd}\{\langle A \rangle\}\{\langle B \rangle\}\{\langle C \rangle\}\{\langle E \rangle\}\{\langle E \rangle\}\{\langle F \rangle\} \dots \text{ to do!}
           166 \DeclareRobustCommand{\varcmd}[6]
                  {\expandafter\newcommand\csname gobble#1arg\endcsname[2]
           167
                    {\csname check#1arg\endcsname{\argsep{##1}{#4}{\empchk{##2}{{##2}}}}}
           168
                  \expandafter\newcommand\csname check#larg\endcsname[1]
           169
                    {\csname @ifnextchar\endcsname%
           170
                      \bgroup{\csname gobble#1arg\endcsname{##1}}{#2{##1#5}#6}}%
           171
                  \expandafter\newcommand\csname#1\endcsname[1]
           172
            173
                    {\csname check#1arg\endcsname{#3##1}}}
```

\empthempth Emptiness check: \empth\{\langle A\rangle\}\{\langle B\rangle\}\) evaluates to the empty string, if Argument  $\langle A \rangle$  is empty,

and to Argument  $\langle B \rangle$ , otherwise.

```
\seqoftag Sequence of tags: \seqoftag\{\langle A \rangle\}\{\langle B \rangle\}\{\langle C \rangle\} ... to do!
              175 \DeclareRobustCommand{\seqoftag}[3]
                   {\@for\itr:={#1}\do%
                     {\expandafter\csedef{\itr#2}%
              177
              178
                       {\noexpand\csname #3\endcsname{\itr}}}
  \seqofcmd Sequence of commands: \seqofcmd{\langle A\rangle}{\langle B\rangle}{\langle C\rangle} \text{... to do!}
              179 \DeclareRobustCommand{\seqofcmd}[3]
              180
                   {\@for\itr:={#1}\do%
              181
                     {\expandafter\csedef{\itr#2}%
              182
                       {\noexpand\csname #3\endcsname{\csname \itr\endcsname}}}
              \seqoflatlow Sequence of Latin lowercase letters: \seqoflatlow{\langle A \rangle}{\langle B \rangle} ... to do!
              184 \DeclareRobustCommand{\seqoflatlow}
                   \{\  \  \{ \  \  \{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\{\langle A \rangle\}\{\langle B \rangle\} ... to do!
              186 \DeclareRobustCommand{\seqoflatupp}
                   {\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}}
\sequence of Latin letters: \sequence \( (A \) \} \) ... to do!
              188 \DeclareRobustCommand{\seqoflatlet}[2]
                   {\seqoflatlow{\#1}{\#2}\seqoflatupp{\#1}{\#2}}
              \seqofgrklow Sequence of Greek lowercase letters: \seqofgrklow\{\langle A \rangle\}\{\langle B \rangle\} ... to do!
              191 \DeclareRobustCommand{\seqofgrklow}
                   {\seqofcmd{alpha,beta,gamma,delta,epsilon,varepsilon,zeta,eta,theta,vartheta,%
                   iota, kappa, varkappa, lambda, mu, nu, xi, omicron, pi, varpi, rho, varrho, sigma, %
              103
                   varsigma,tau,upsilon,phi,varphi,chi,psi,omega}}
\seqofgrkupp
             Sequence of Greek uppercase letters: \seqofgrkupp\{\langle A \rangle\}\{\langle B \rangle\}\ ... to do!
              195 \DeclareRobustCommand{\seqofgrkupp}
                   Iota, Kappa, varKappa, Lambda, Mu, Nu, Xi, Omicron, Pi, varPi, Rho, varRho, Sigma, %
                   varSigma,Tau,Upsilon,Phi,varPhi,Chi,Psi,Omega}}
\seqofgrklet
             Sequence of Greek letters: \seqofgrklet{\langle A \rangle}{\langle B \rangle} ... to do!
              199 \DeclareRobustCommand{\seqofgrklet}[2]
                   {\seqofgrklow{#1}{#2}\seqofgrkupp{#1}{#2}}
              Sequence of lowercase letters: \seqoflow{\langle A \rangle}{\langle A \rangle} \dots to do!
              202 \DeclareRobustCommand{\seqoflow}[2]
                   {\seqoflatlow{#1}{#2}\seqofgrklow{#1}{#2}}
             Sequence of uppercase letters: \ensuremath{\mathsf{Vagain}} \{\langle A \rangle\} \{\langle B \rangle\} \dots \text{ to do!}
              204 \DeclareRobustCommand{\seqofupp}[2]
                  {\seqoflatupp{#1}{#2}\seqofgrkupp{#1}{#2}}
  \seqoflet
             Sequence of all letters: \ensuremath{\mathsf{Vagnerical}} \{ \langle A \rangle \} \{ \langle B \rangle \} \dots \text{ to do!}
              206 \DeclareRobustCommand{\segoflet}[2]
                   {\seqoflow{#1}{#2}\seqofupp{#1}{#2}}
```

```
212 \ifaux@
213
214 \ifamsdef@
215 % AMS Packages
   \RequirePackage{mathtools}
    \RequirePackage{amssymb}
    \RequirePackage{stmaryrd}
   \interdisplaylinepenalty=2500
220 \fi
221
222 \in \mathbb{C}
223 % AMS Theorem Tools
   \RequirePackage{amsthm}
225 \fi
226
227 \ifthmtls@
   % Extended Theorem Tools
    \RequirePackage{thmtools}
    \RequirePackage{thm-restate}
230
231 \fi
232
233 \ifenmtls@
234 % Enumeration Tools
    \RequirePackage{paralist}
236 \fi
237
238 \ifhypref@
    % Hyper References
    \RequirePackage{hyperref}
    \hypersetup {
     pdfsubject
                 = {},
242
     pdfkeywords
                = {},
243
     pdfproducer = {},
244
245
     pdfcreator
                 = {},
246
     pdfpagemode = {UseNone},
247
     pdfstartview = {FitH},
248
     urlcolor
                 = {blue},
249
     colorlinks
250 }
251 \fi
252
253 \iffnttls@
254 % Font Tools
255 \RequirePackage[final]{microtype}
256 \fi
257
258 \ifcrv@
    % Camera-Ready Version
261
    %%...
^{262}
263 \else
    % Draft Version
264
265
    %%...
266
267
    \ifchgbar@
268
269
     % Change Bars
270
      \RequirePackage{changebar}
271
    \fi
```

```
272
         273
             \iflinnum@
         274
               % Line Numbers
         275
               \if@twocolumn
                \RequirePackage[switch, columnwise, mathlines]{lineno}\linenumbers
         276
         277
               \else
                \RequirePackage[columnwise, mathlines]{lineno}\linenumbers
         278
               \fi
         279
             \fi
         280
         281
             %%...
         282
         283
         284 \fi
         285
         286 \fi
         \mathbbo Bbo Math Font: ... to do!
         291 \left( \frac{mathbbo}{{\mathbb{U}_{m}}_{n}} \right)
 \matheus Eus Math Font: ... to do!
         292 \ifdef{\matheus}{}{\DeclareMathAlphabet{\matheus}{U}{eus}{m}{n}}
 \mathpzc Pzc Math Font: ... to do!
         293 \ifdef{\mathpzc}{}{\DeclareMathAlphabet{\mathpzc}{T1}{pzc}{m}{it}}
 \mathscr Scr Math Font: ... to do!
         294 \left\{ \mathbf{Wathscr} { \mathbb{U} { rsfs}{m}{n} } \right\}
         \newtxt ... to do!
           • \mbox{\ensuremath{\text{newtxt[\mbox{\ensuremath{\text{Sup}}[Ext]} = "Name}_{sub}^{sup}Ext"}}
           • \newtxt[\sffamily]{Name}[sub][sup][Ext] = "Name_sup_Ext"
           • \newtxt[\ttfamily]{Name}[sub][sup][Ext] = "Name_sub_Ext"
           • \newtxt*[\rmfamily]{Name}[sub][sup][Ext] = "Name_sub_Ext"
           • \newtxt*[\sffamily]{Name}[sub][sup][Ext] = "Name_sub_Ext"
           • \newtxt*[\ttfamily]{Name}[sub][sup][Ext] = "Name_sub_Ext"
         299 \DeclareRobustCommand{\newtxt}
            {\@ifstar{\@snewtxt}{\@newtxt}}
         301 \DeclareRobustCommandx{\@newtxt}[5][1=, 3=, 4=, 5=]
             {\text{#1#2\txtsubsup[#1]{#3}{#4}#5}\xspace}
         303 \DeclareRobustCommandx{\@snewtxt}[5][1=, 3=, 4=, 5=]
             {\#1\#2}\times {\#4}\#5\operatorname{normalfont}\times {\#4}
\newtxtsty ... to do!
           • \newtxtsty{\rmfamily}{Name}[sub][sup][Ext] = "Name_sub_Ext"
           • \newtxtsty{\rmfamily}[\sffamily]{Name}[sub][sup][Ext] = "Name_sup_Ext"
           • \newtxtsty{\rmfamily}[\ttfamily]{Name}[sub][sup][Ext] = "Name_sup_Ext"
           • \newtxtsty*{\rmfamily}{Name}[sub][sup][Ext] = "Name_sub_Ext"
           • \newtxtsty*{\rmfamily}[\sffamily]{Name}[sub][sup][Ext] = "Name_sup_Ext"
           • \newtxtsty*{\rmfamily}[\ttfamily]{Name}[sub][sup][Ext] = "Name_sup_Ext"
```

```
305 \DeclareRobustCommand{\newtxtsty}
                                                                        306 {\@ifstar{\@snewtxtsty}{\@newtxtsty}}
                                                                        307 \DeclareRobustCommandx{\@newtxtsty}[2][2=]
                                                                        308 {\newtxt[\defval{#2}{#1}]}
                                                                        309 \DeclareRobustCommandx{\@snewtxtsty}[2][2=]
                                                                       310 {\newtxt*[\defval{#2}{#1}]}
                 \newtxtarg ... to do!
                                                                                  \bullet \ \texttt{Name}_{sub}^{sup}[\texttt{Ext1}] \ \texttt{Arg}[\texttt{Ext2}] = \texttt{``Name}_{sub}^{sup} \texttt{Ext1}(\texttt{Arg}) \texttt{Ext2}''
                                                                                   • \newtxtarg[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name_sub_Ext1(Arg)Ext2"
                                                                                   \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \
                                                                                    \bullet \texttt{ \newtxtarg*[\nmfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name^{\sup}_{\sup} Ext1(Arg) Ext2" } 
                                                                                   • \newtxtarg*[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name_sub_Ext1(Arg)Ext2"
                                                                                  • \newtxtarg*[\ttfamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name_sup_Ext1(Arg)Ext2"
                                                                        311 \DeclareRobustCommand{\newtxtarg}
                                                                        312 {\@ifstar{\@snewtxtarg}{\@newtxtarg}}
                                                                        313 \DeclareRobustCommandx{\@newtxtarg}[7][1=, 3=, 4=, 5=, 7=]
                                                                        314 {\newtxt[#1]{#2}[#3][#4][\argmid{#5(}{#6}{)#7}]}
                                                                        315 \DeclareRobustCommandx{\@snewtxtarg}[7][1=, 3=, 4=, 5=, 7=]
                                                                        316 {\newtxt*[#1]{#2}[#3][#4][\argmid{#5(}{#6}{)#7}]}
    \newtxtargsty ... to do!
                                                                                   \bullet \texttt{ \  \  } [\texttt{Sub}][\texttt{Sub}][\texttt{Ext1}] \{\texttt{Arg}\}[\texttt{Ext2}] = \texttt{``Name}^{\sup}_{\sup} \texttt{Ext1}(\texttt{Arg}) \texttt{Ext2}" 
                                                                                    \bullet \texttt{\newtxtargsty}(\texttt{\nmfamily})[\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][\texttt{\name}][
                                                                                   \bullet \texttt{\newtxtargsty} \texttt{\nmfamily}[\texttt{\name}] \texttt{\name} \texttt{\normall} \texttt{\name} \texttt{\normall} \texttt{\
                                                                                    \bullet \texttt{ \newtxtargsty*{\nmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name^{\sup}_{\sup} Ext1(Arg) Ext2" } 
                                                                                    \bullet \texttt{\newtxtargsty*{\normaliv}[\sffamily]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name^{sup}_{sub}Ext1(Arg)Ext2" } \\
                                                                                   • \newtxtargsty*{\rmfamily}[\ttfamily]{\Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name_sup}Ext1(Arg)Ext2"
                                                                        317 \DeclareRobustCommand{\newtxtargsty}
                                                                        318 {\@ifstar{\@snewtxtargsty}{\@newtxtargsty}}
                                                                        319 \DeclareRobustCommandx{\@newtxtargsty}[2][2=]
                                                                                          {\newtxtarg[\defval{#2}{#1}]}
                                                                        321 \DeclareRobustCommandx{\@snewtxtargsty}[2][2=]
                                                                                          {\newtxtarg*[\defval{#2}{#1}]}
             \newtxtoarg ... to do!
                                                                                  • \mbox{\ensuremath{\text{loss}}[sub][sup][Arg]} = \mbox{\ensuremath{\text{Name}}} \mbox{\ensuremath{\text{sub}}}(Arg)
                                                                                  • \newtxtoarg[\sffamily]{Name}[sub][sup][Arg] = "Name_sup(Arg)"
                                                                                   • \newtxtoarg[\ttfamily]{Name}[sub][sup][Arg] = "Name_sub_(Arg)"
                                                                                   • \newtxtoarg*[\mbox{\sc Name}] {\newtxtoarg*[\mbox{\sc Name}] [\mbox{\sc Sup}] [\mbox{\sc Arg}]} = \norm{\sc Name} {\norm{\sc Name} \norm{\sc Sup} \norm{\sc Name} (\mbox{\sc Arg})}
                                                                                   • \newtxtoarg*[\sffamily]{Name}[sub][sup][Arg] = "Name_sub_(Arg)"
                                                                                   • \newtxtoarg*[\ttfamily]{Name}[sub][sup][Arg] = "Name_sub_(Arg)"
                                                                        323 \DeclareRobustCommand{\newtxtoarg}
                                                                        324 {\@ifstar{\@snewtxtoarg}{\@newtxtoarg}}
                                                                        325 \DeclareRobustCommandx{\@newtxtoarg}[5][1=, 3=, 4=, 5=]
                                                                        326 {\newtxtarg[#1]{#2}[#3][#4][]{#5}[]}
                                                                        327 \DeclareRobustCommandx{\@snewtxtoarg}[5][1=, 3=, 4=, 5=]
                                                                                           {\newtxtarg*[#1]{#2}[#3][#4][]{#5}[]}
\newtxtoargsty ... to do!
                                                                                  • \new txtoargsty{\mbox{\mbox{\mbox{$Name$}}[sub] [sup] [Arg] = "Name}_{sub}^{sup}(Arg)"}
                                                                                  • \newtxtoargsty{\rmfamily}[\ttfamily]{Name}[sub][sup][Arg] = "Name_sub_(Arg)"
                                                                                   \bullet \ \texttt{\normalights} \ [sub] \ [sup] \ [Arg] = "Name^{\sup}_{sub} (Arg)"
                                                                                   • \newtxtoargsty*{\rmfamily}[\sffamily]{Name}[sub][sup][Arg] = "Name_sub_(Arg)"
```

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 \bullet \texttt{ \  \  } [Sub] [Sup] [Arg] = \texttt{``Name}_{sub} (Arg)" \\
                                             329 \DeclareRobustCommand{\newtxtoargsty}
                                             330 {\@ifstar{\@snewtxtoargsty}{\@newtxtoargsty}}
                                             331 \DeclareRobustCommandx{\@newtxtoargsty}[2][2=]
                                             332 {\newtxtoarg[\defval{#2}{#1}]}
                                             333 \DeclareRobustCommandx{\@snewtxtoargsty}[2][2=]
                                             334 {\newtxtoarg*[\defval{#2}{#1}]}
          \newtxtpar ... to do!
                                                    \bullet \texttt{ \newtxtpar[\nmfamily]{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name^{\sup}_{sub}Ext1[Par]Ext2" } 
                                                   • \newtxtpar[\sffamily]{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name_sub_Ext1[Par]Ext2"
                                                   • \newtxtpar[\ttfamily]{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name_sup_Ext1[Par]Ext2"
                                                    \bullet \texttt{\newtxtpar*[\nmfamily]{Name}[sub][sup][Ext1]{Par}[Ext2]} = "Name^{\sup}_{\sup} Ext1[Par] Ext2" 
                                                    \bullet \texttt{\newtxtpar*[\sub][sub][sub][Ext1]{Par}[Ext2] = \texttt{``Name}^{sup}_{sub} \texttt{Ext1[Par]Ext2''} } 
                                                   • \newtxtpar*[\ttfamily]{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name sup Ext1[Par]Ext2"
                                             335 \DeclareRobustCommand{\newtxtpar}
                                             336 {\@ifstar{\@snewtxtpar}{\@newtxtpar}}
                                             337 \DeclareRobustCommandx{\Onewtxtpar}[7][1=, 3=, 4=, 5=, 7=]
                                             338 {\newtxt[#1]{#2}[#3][#4][\argmid{#5[}{#6}{]#7}]}
                                             339 \DeclareRobustCommandx{\@snewtxtpar}[7][1=, 3=, 4=, 5=, 7=]
                                             340 {\newtxt*[#1]{#2}[#3][#4][\argmid{#5[}{#6}{]#7}]}
  \newtxtparsty ... to do!
                                                    \bullet \texttt{ \newtxtparsty{\nmfamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name^{\sup}_{sub} Ext1[Par] Ext2" } 
                                                   • \newtxtparsty{\rmfamily}[\sffamily]{\Name}[sub][sup][Ext1]{\Par}[Ext2] = "Name_sub_Ext1[\Par]Ext2"
                                                   • \newtxtparsty{\rmfamily}[\ttfamily]{\Name}[sub][sup][Ext1]{\Par}[Ext2] = "Name_sub_Ext1[Par]Ext2"
                                                   • \mbox{\newtxtparsty*{\nmfamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = \mbox{\newtxtparsty*{\nmfamily}{Ext1[Par]Ext2"}}
                                                    \bullet \texttt{\newtxtparsty*{\normalivg}[sub][sub][sub][Ext1]{Par}[Ext2] = \texttt{``Name}^{sup}_{sub} \texttt{Ext1[Par]Ext2''} 
                                                    \bullet \mathtt{Name}_{sub}^{sup}[\mathtt{Name}_{sub}^{sup}][\mathtt{Ext1}] \\ + \mathtt{Par}_{sub}^{sup}[\mathtt{Ext2}] \\ = \mathtt{"Name}_{sub}^{sup}[\mathtt{Ext1}_{sub}^{sup}][\mathtt{Ext2}] \\ + \mathtt{Par}_{sub}^{sup}[\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}] \\ + \mathtt{Par}_{sub}^{sup}[\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}] \\ + \mathtt{Par}_{sub}^{sup}[\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}] \\ + \mathtt{Par}_{sub}^{sup}[\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2}_{sub}^{sup}][\mathtt{Ext2
                                             341 \DeclareRobustCommand{\newtxtparsty}
                                             342 {\@ifstar{\@snewtxtparsty}{\@newtxtparsty}}
                                             343 \DeclareRobustCommandx{\@newtxtparsty}[2][2=]
                                             344 {\text{newtxtpar}[\defval{#2}{#1}]}
                                             345 \DeclareRobustCommandx{\@snewtxtparsty}[2][2=]
                                            346 {\texttt{newtxtpar*[\defval{#2}{#1}]}}
        \newtxtopar ... to do!
                                                   • \mbox{\ensuremath{\texttt{Name}}[sub][sup][Par]} = \mbox{\ensuremath{\texttt{Name}}} \mbox{\ensuremath{\texttt{Sup}}[Par]}"
                                                   • \newtxtopar[\sffamily]{Name}[sub][sup][Par] = "Name_sub_[Par]"
                                                   \bullet \ \texttt{\ \ } [Sub] \ [sup] \ [Par] = "Name_{sub}^{sup} \ [Par]"
                                                   • \mbox{\ensuremath{\texttt{Name}}[sub][sup][Par]} = \mbox{\ensuremath{\texttt{Name}}} \mbox{\ensuremath{\texttt{Sup}}[Par]}"
                                                   • \newtxtopar*[\sffamily]{Name}[sub][sup][Par] = "Name_sub_[Par]"
                                                   • \mbox{\tabular} {\rm Name} [sub] [sup] [Par] = "Name_{sub}^{sup} [Par]"
                                             347 \DeclareRobustCommand{\newtxtopar}
                                             348 {\@ifstar{\@snewtxtopar}{\@newtxtopar}}
                                             349 \DeclareRobustCommandx{\@newtxtopar}[5][1=, 3=, 4=, 5=]
                                             350 {\newtxtpar[#1]{#2}[#3][#4][]{#5}[]}
                                             351 \DeclareRobustCommandx{\@snewtxtopar}[5][1=, 3=, 4=, 5=]
                                             352 {\newtxtpar*[#1]{#2}[#3][#4][]{#5}[]}
\newtxtoparsty ... to do!
                                                    \bullet \verb| \newtxtoparsty{\new1} {\rm [sub] [sup] [Par]} = "Name_{\rm sub}^{\rm sup} [Par]" \\
                                                   • \newtxtoparsty{\rmfamily}[\sffamily]{Name}[sub][sup][Par] = "Name_sub[Par]"
                                                   • \newtxtoparsty{\rmfamily}[\ttfamily]{Name}[sub][sup][Par] = "Name_sub_[Par]"
                                                   • \mbox{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\newtxtoparsty*{\new
```

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• \newtxtoparsty*{\rmfamily}[\sffamily]{Name}[sub][sup][Par] = "Name_sub_Par]"
                             • \newtxtoparsty*{\rmfamily}[\ttfamily]{Name}[sub][sup][Par] = "Name_sup_[Par]"
                        353 \DeclareRobustCommand{\newtxtoparsty}
                        354 {\@ifstar{\@snewtxtoparsty}{\@newtxtoparsty}}
                        355 \DeclareRobustCommandx{\@newtxtoparsty}[2][2=]
                        356 {\newtxtopar[\defval{#2}{#1}]}
                        357 \DeclareRobustCommandx{\@snewtxtoparsty}[2][2=]
                                {\newtxtopar*[\defval{#2}{#1}]}
\txtsubsup ... to do!
                            • \txtsubsup[\sffamily]{Aa}{Bb} = "Bb" Aa
                             • \txtsubsup[\ttfamily]{Aa}{Bb} = \(\frac{\lambda Bb}{\text{Aa}}\)
                        359 \DeclareRobustCommand{\txtsubsup}[3][]
                                 {\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_{\ensuremath}_
           \txt ... to do!
                            • \txt{Name}[sub][sup][Ext] = "Name_sub_Ext"
                            • \text{txt[\scshape]{Name}[sub][sup][Ext]} = \text{"Name}_{\text{SUB}}^{\text{SUP}} \text{Ext"}
                             • \txt[\bfseries]{Name}[sub][sup][Ext] = "Name_sup_Ext"
                             • \txt*{Name}[sub][sup][Ext] = "Name_sub_Ext"
                            • \text{txt*[\scshape]} \{\text{Name}\} [\text{sub}] [\text{Ext}] = \text{"Name}_{\text{SUB}}^{\text{SUP}} Ext"
                             • \txt*[\bfseries]{Name}[sub][sup][Ext] = "Name_sub_Ext"
                        362 \DeclareRobustCommand{\txt}
                                {\@ifstar{\newtxtsty*{\txtsty}}{\newtxtsty{\txtsty}}}
     \txtarg ... to do!
                            • \text{txtarg{Name}}[\text{sub}][\text{sup}][\text{Ext1}]{\text{Arg}}[\text{Ext2}] = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}"
                            • \txtarg[\schape]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "Name_{SUB}^{SUP}Ext1(Arg)Ext2"
                             • \text{txtarg*{Name}[sub][sup][Ext1]{Arg}[Ext2]} = \text{"Name}_{\text{sub}}^{\text{sup}}\text{Ext1(Arg)Ext2"}
                            • \txtarg*[\scshape]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NAMESUBEXT1(ARG)EXT2"
                             • \txtarg*[\bfseries] {Name} [sub] [sup] [Ext1] {Arg} [Ext2] = "Name sub Ext1(Arg) Ext2"
                        364 \DeclareRobustCommand{\txtarg}
                                {\@ifstar{\newtxtargsty*{\txtsty}}{\newtxtargsty{\txtsty}}}
   \txtoarg ... to do!
                            • \txtoarg{Name}[sub][sup][Arg] = "Name<sub>sub</sub>(Arg)"
                            • \txtoarg[\scshape]{Name}[sub][sup][Arg] = "NAME_SUB(ARG)"
                             • \t = \t Name [Name] [Sub] [Sup] [Arg] = \t Name [Sub] [Arg]
                             • \txtoarg*{Name}[sub][sup][Arg] = "Name<sup>sup</sup><sub>sub</sub>(Arg)"
                            • \txtoarg*[\scshape]{Name}[sub][sup][Arg] = "NAME_SUB(ARG)"
                             • \txtoarg*[\bfseries]{Name}[sub][sup][Arg] = "Name^{sup}_{sub}(Arg)"
                        366 \DeclareRobustCommand{\txtoarg}
                                {\@ifstar{\newtxtoargsty*{\txtsty}}{\newtxtoargsty{\txtsty}}}
     \txtpar ... to do!
                            • \txtpar{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name_sub_Ext1[Par]Ext2"
                            • \txtpar[\scshape] {Name} [sub] [sup] [Ext1] {Par} [Ext2] = "NAME_SUP_EXT1 [PAR] EXT2"
                             • \txtpar[\bfseries] {Name} [sub] [sub] [Ext1] {Par} [Ext2] = "Name_sub_Ext1[Par]Ext2"
                             • \txtpar*{Name}[sub][sup][Ext1]{Par}[Ext2] = "Name_{\text{sub}}^{\text{sup}}Ext1[Par]Ext2"
```

• \txtpar\*[\scshape]{Name}[sub][sup][Ext1]{Par}[Ext2] = "NAME\_SUP EXT1[PAR]EXT2"

```
368 \DeclareRobustCommand{\txtpar}
                                  {\@ifstar{\newtxtparsty*{\txtsty}}{\newtxtparsty{\txtsty}}}
     \txtopar ... to do!
                               • \text{txtopar{Name}[sub][sup][Par]} = \text{"Name}_{\text{sub}}^{\text{sup}}[Par]"
                               • \txtopar[\scshape]{Name}[sub][sup][Par] = "NAME_SUB[PAR]"
                               • \t vopar[\bfseries]{Name}[sub][sup][Par] = "Name <math>_{sub}^{sup}[Par]"
                               • \text{txtopar}*{\text{Name}}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"
                               • \txtopar*[\scshape]{Name}[sub][sup][Par] = "NAME_SUB[PAR]"
                               • \text{txtopar*[\bfseries]}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{"Name}_{\text{sub}}^{\text{sup}}[\text{Par}]"
                           370 \DeclareRobustCommand{\txtopar}
                                  {\@ifstar{\newtxtoparsty*{\txtsty}}{\newtxtoparsty{\txtsty}}}
       \txtsty ... to do!
                          372 \newcommand{\txtsty}
                                  {\mdseries\upshape\rmfamily}
                          \cmdtxt ... to do!
                               • \cmdtxt{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
                                   \text{txtNewCmd}\{\text{Name}\}[\text{sub}][\text{Ext}] = \text{Name}_{\text{SUB}}^{\text{SUP}}\text{Ext}
                                  \text{txtNewCmd}*{\text{Name}}[\text{sub}][\text{Ext}] = \text{Name}^{\text{SUP}}_{\text{SUB}}\text{Ext}
                           375 \DeclareRobustCommand{\cmdtxt}[1]
                                   {\csdef{txt#1}%
                          377
                                         {\@ifstar%
                                             {\newtxtsty*{\csname txtsty#1\endcsname}}%
                           378
                          379
                                             {\newtxtsty{\csname txtsty#1\endcsname}}}}
 \cmdtxtarg ... to do!
                               • \cmdtxtarg{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
                                   \verb|\txtargNewCmd{Name}[sub][sup][Ext1]{Arg}[Ext2] = \verb|\NAME|_{SUB}^{SUB}Ext1(Arg)Ext2|
                                  \verb|\txtargNewCmd*{Name}| [sub] [sup] [Ext1] {Arg} [Ext2] = \verb|\txtargNewEmd*{Name}| Ext1 (Arg) Ext2 |
                           380 \DeclareRobustCommand{\cmdtxtarg}[1]
                                   {\csdef{txtarg#1}%
                          381
                                         {\@ifstar%
                          382
                                             {\newtxtargsty*{\csname txtsty#1\endcsname}}%
                          383
                                             {\newtxtargsty{\csname txtsty#1\endcsname}}}}
                          384
\cmdtxtoarg ... to do!
                               \cmdtxtoarg{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
                                   \verb|\txtoargNewCmd{Name}[sub][sup][Arg] = \verb|\Name|_{SUB}^{SUP}(Arg)
                                   \t \ [sub] [sup] [Arg] = NAME_SUB (ARG)
                          385 \DeclareRobustCommand{\cmdtxtoarg}[1]
                          386
                                  {\csdef{txtoarg#1}%
                                         {\@ifstar%
                           387
                                             {\newtxtoargsty*{\csname txtsty#1\endcsname}}%
                          388
                                            {\newtxtoargsty{\csname txtsty#1\endcsname}}}}
                          389
 \cmdtxtpar ... to do!
                               • \cmdtxtpar{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
                                   \verb|\txtparNewCmd*{Name}| [sub] [sup] [Ext1] {Par} [Ext2] = \verb|\txtparNewEsub| [sub] [sup] [Ext1] {Par} [Ext2] = \verb|\txtparNewEsub| [sub] [s
                           390 \DeclareRobustCommand{\cmdtxtpar}[1]
                                    {\csdef{txtpar#1}%
                           391
                                         {\@ifstar%
                           392
                                             {\newtxtparsty*{\csname txtsty#1\endcsname}}%
                           393
                           394
                                             {\newtxtparsty{\csname txtsty#1\endcsname}}}}
```

```
\cmdtxtopar ... to do!
                              • \cmdtxtopar{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
                                 \text{txtoparNewCmd}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Par}] = \text{Name}_{\text{SUB}}^{\text{SUP}}[\text{Par}]
                                 \t \ [sub] [sup] [Par] = \ NAME_{SUB}^{SUP} [PAR]
                         395 \DeclareRobustCommand{\cmdtxtopar}[1]
                                  {\csdef{txtopar#1}%
                         396
                                       {\@ifstar%
                         397
                         398
                                          {\newtxtoparsty*{\csname txtsty#1\endcsname}}%
                         399
                                          {\newtxtoparsty{\csname txtsty#1\endcsname}}}}
 \cmdtxtall ... to do!
                              • \cmdtxtall{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
                                 \verb|\txtNewCmd{Name}[sub][sup][Ext] = \verb|\Name|^{SUP}_{SUB}Ext|
                                 \texttt{\txtargNewCmd}\{\texttt{Name}\}[\texttt{sub}][\texttt{sup}][\texttt{Ext1}]\{\texttt{Arg}\}[\texttt{Ext2}] = \texttt{Name}^{\texttt{SUP}}_{\texttt{SUB}}\texttt{Ext1}(\texttt{Arg})\texttt{Ext2}
                                 \verb|\txtoargNewCmd{Name}[sub][sup][Arg] = \verb|\Name|^{SUP}(Arg)
                                 \verb|\txtoparNewCmd{Name}[sub][sup][Par] = \verb|\Name|_{SUB}^{SUP}[Par]|
                         400 \DeclareRobustCommand{\cmdtxtall}[1]
                                  {\cmdtxt{#1}\cmdtxtarg{#1}\cmdtxtoarg{#1}\cmdtxtpar{#1}\cmdtxtopar{#1}}
                         \usrtxt ... to do!
                             • \usrtxt{cmdName}{Suf}{}:
                                 \c MameSuf = cmdName
                                 \c MameSuf* = 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];
                                 \colone{line} 
                                 \cmdNameSuf* = newName
                                 \usrtxt{cmdName}{Suf}{arg}[newName];
                                 \cmdNameSuf{Arg} = newName(Arg)
                                 \c MameSuf*{Arg} = newName(Arg)
                                 \usrtxt{cmdName}{Suf}{par}[newName];
                                 \cmdNameSuf{Par} = newName[Par]
                                 \c MameSuf*{Par} = newName[Par]
                         403 \DeclareRobustCommandx{\usrtxt}[4][4=]
                         404
                                  {\csdef{#1#2}{%
                         405
                                       \@ifstar%
                                          {\csname txt#3\endcsname*{\defval{#4}{#1}}}%
                         406
                                          {\csname txt#3\endcsname{\defval{#4}{#1}}}}
                         407
                         \newmth ... to do!
                             • \newmth[mathsf] {Name} [sub] [sup] [Ext] = "Name_{sub}^{sup} Ext"
                              • \newmth*[mathrm] {Name} [sub] [sup] [Ext] = "Name_{sub}^{sup}Ext"
                              • \newmth*[mathtt] {Name} [sub] [sup] [Ext] = "Name_{sub}^{sup}Ext"
```

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412 \DeclareRobustCommand{\newmth}
                                                                                                                                                                          413 {\@ifstar{\@snewmth}{\@newmth}}
                                                                                                                                                                          414 \DeclareRobustCommandx{\Onewmth}[5][1=, 3=, 4=, 5=]
                                                                                                                                                                          415 {\ensuremath{\csname#1\endcsname{#2}\mthsubsup{#3}{#4}#5}}
                                                                                                                                                                          416 \DeclareRobustCommandx{\@snewmth}[5][1=, 3=, 4=, 5=]
                                                                                                                                                                        417 {\ensuremath{\csname#1\endcsname #2\mthsubsup{#3}{#4}#5}}
                                \newmthsty ... to do!
                                                                                                                                                                                                   • \newmthsty{mathrm}{Name}[sub][sup][Ext] = "Name_{sub}^{sup}Ext"
                                                                                                                                                                                                     • \newmthsty{mathrm}[mathsf]{Name}[sub][sup][Ext] = "Name_{sub}^{sup}Ext"
                                                                                                                                                                                                     • \newmthsty{mathrm} [mathtt] {Name} [sub] [sup] [Ext] = "Name_{sub}^{sup}Ext"
                                                                                                                                                                                                     • \newmthsty*{mathrm} [mathsf] {Name} [sub] [sup] [Ext] = "Name_{sub}^{sup}Ext"
                                                                                                                                                                                                      \bullet \ \texttt{\name} = \texttt{\n
                                                                                                                                                                          418 \DeclareRobustCommand{\newmthsty}
                                                                                                                                                                                                                        {\@ifstar{\@snewmthsty}{\@newmthsty}}
                                                                                                                                                                          420 \DeclareRobustCommandx{\@newmthsty}[2][2=]
                                                                                                                                                                                                                      {\text{\newmth}[\defval{#2}{#1}]}
                                                                                                                                                                          422 \DeclareRobustCommandx{\@snewmthsty}[2][2=]
                                                                                                                                                                          423 {\newmth*[\defval{#2}{#1}]}
                                \newmtharg ... to do!
                                                                                                                                                                                                   • \newmtharg[mathrm] {Name} [sub] [sup] [Ext1] {Arg^{Ex^{2}}} [Ext2] = "Name_{sub}^{sup} Ext1 (Arg^{Ex^{Ex}}) Ext2" = "Name_{sub}^{sub} Ext2" = "Name_
                                                                                                                                                                                                    \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                                                                                                                                                                    \bullet \ \texttt{\newmtharg[mathtt]{Name}[sub][sub][Ext1]{Arg^{Ex^{}}{Ex}}] \ [\texttt{Ext2}] = \texttt{``Name}_{sub}^{sup} Ext1 \Big( Arg^{Ex^{Ex}} \Big) Ext2 " \\ \texttt{\newmtharg[mathtt]{Name}[sub][sub][sub][ext1]{Arg^{}} } \\ \texttt{\newmtharg[mathtt]{Name}[sub][sub][sub][ext1]{Arg^{}} } \\ \texttt{\newmtharg[mathtt]{Name}[sub][sub][sub][ext1][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][ext2][
                                                                                                                                                                                                      \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ 
                                                                                                                                                                                                     • \newmtharg*[mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}}[Ext2] = "Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2"
                                                                                                                                                                           424 \DeclareRobustCommand{\newmtharg}
                                                                                                                                                                                                                      {\@ifstar{\@snewmtharg}{\@newmtharg}}
                                                                                                                                                                          426 \DeclareRobustCommandx{\@newmtharg}[7][1=, 3=, 4=, 5=, 7=]
                                                                                                                                                                                                                                  {\newmth[#1]{#2}[#3][#4][\argmid{#5\!\left(\}{#6}{\right)\arglef{\!}{#7}}]}
                                                                                                                                                                          428 \DeclareRobustCommandx{\@snewmtharg}[7][1=, 3=, 4=, 5=, 7=]
                                                                                                                                                                                                                      {\newmth[#1]{#2}[#3][#4][\argmid{#5(}{#6}{)#7}]}
\newmthargsty ... to do!
                                                                                                                                                                                                    \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                                                                                                                                                                    \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ 
                                                                                                                                                                                                    \bullet \verb| \newmthargsty{mathrm}[mathtt]{Name}[sub][sup][Ext1]{Arg^{Ex^{}}}[Ext2] = "Name_{sub}^{sup}Ext1\Big(Arg^{Ex^{Ex}}\Big)Ext2" + (Arg^{Ex^{Ex}})[Ext2] + (Arg^{Ex})[Ext2] + (Arg^{Ex})[E
                                                                                                                                                                                                      \bullet \texttt{\newmthargsty*\{mathrm\}\{Name\}[sub][sup][Ext1]\{Arg^{\{Ex^{\{Ex\}\}\}}[Ext2]} = \texttt{``Name}^{sup}_{sub}Ext1(Arg^{Ex^{Ex}})Ext2" } \\
                                                                                                                                                                                                      \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ 
                                                                                                                                                                                                      \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                                                                                                                                           430 \DeclareRobustCommand{\newmthargsty}
                                                                                                                                                                                                                 {\@ifstar{\@snewmthargsty}{\@newmthargsty}}
                                                                                                                                                                          432 \DeclareRobustCommandx{\@newmthargsty}[2][2=]
                                                                                                                                                                          433 {\newmtharg[\defval{#2}{#1}]}
                                                                                                                                                                          434 \DeclareRobustCommandx{\@snewmthargsty}[2][2=]
                                                                                                                                                                                                                      {\newmtharg*[\defval{#2}{#1}]}
                      \newmthoarg ... to do!
                                                                                                                                                                                                     • \newmthoarg[mathrm] {Name} [sub] [sup] [Arg^{Ex^{Ex}}] = "Name_{sub}^{sup} (Arg^{Ex^{Ex}})"
```

```
• \newmthoarg[mathsf]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup}(Arg^{Ex^{Ex}})"
                                                                                                                                                                                     \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                                                                                                                                                                   \label{lem:lemmaths} $$\operatorname{mathsf}_{\mathrm{sub}}[\sup] [\operatorname{Arg}_{\mathrm{Ex}}] = \operatorname{Name}_{\mathrm{sub}}^{\sup} (\operatorname{Arg}_{\mathrm{Ex}}^{\mathrm{Ex}})" = \operatorname{Name}_{\mathrm{sub}}^{\mathrm{Ex}} (\operatorname{Arg}_{\mathrm{Ex}}^{\mathrm{Ex}})" = \operatorname{Name}_{\mathrm{sub}}^{\mathrm{Ex}} (\operatorname{Arg}_{\mathrm{Ex}}^{\mathrm{Ex}})" = \operatorname{Name}_{\mathrm{Sub}}^{\mathrm{Ex}} (\operatorname{Arg}_{\mathrm{Ex}}^{\mathrm{Ex}})" = \operatorname{Name}_{\mathrm{Sub}}^{\mathrm{Ex}} (\operatorname{Arg}_{\mathrm{Ex}}^{\mathrm{Ex}})" = \operatorname{Name}_{\mathrm{Ex}}^{\mathrm{Ex}} (\operatorname{Ex})" = \operatorname{Name}_{\mathrm{Ex}}^{\mathrm{Ex}} (\operatorname{Arg}_{\mathrm{Ex}}^{\mathrm{Ex}})" = \operatorname{Name}_{\mathrm{Ex}}^{\mathrm{Ex}} (\operatorname{Ex})" = \operatorname{Name}_{\mathrm{Ex}}^{\mathrm{Ex}
                                                                                                                                                                                    436 \DeclareRobustCommand{\newmthoarg}
                                                                                                                                                                                                            {\@ifstar{\@snewmthoarg}{\@newmthoarg}}
                                                                                                                                                            438 \DeclareRobustCommandx{\@newmthoarg}[5][1=, 3=, 4=, 5=]
                                                                                                                                                                                                             {\newmtharg[#1]{#2}[#3][#4][]{#5}[]}
                                                                                                                                                            440 \DeclareRobustCommandx{\@snewmthoarg}[5][1=, 3=, 4=, 5=]
                                                                                                                                                                                                         {\newmtharg*[#1]{#2}[#3][#4][]{#5}[]}
\newmthoargsty ... to do!
                                                                                                                                                                                    • \newmthoargsty{mathrm}{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup} (Arg^{Ex^{Ex}})"
                                                                                                                                                                                     \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                                                                                                                                                   \bullet \ \texttt{\  \  } [\texttt{mathtt}] \texttt{\  \  } [\texttt{Sub}] \texttt{\  \  } [\texttt{Ex}^{Ex}] = \texttt{\  \  } [\texttt{\  \  } ] = \texttt{\  \  } [\texttt{\  \  } ] 
                                                                                                                                                                                    • \newmthoargsty*{mathrm}{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup}(Arg^{Ex^{Ex}})"
                                                                                                                                                                                     \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                                                                                                                            442 \DeclareRobustCommand{\newmthoargsty}
                                                                                                                                                                                                             {\@ifstar{\@snewmthoargsty}{\@newmthoargsty}}
                                                                                                                                                            444 \DeclareRobustCommandx{\@newmthoargsty}[2][2=]
                                                                                                                                                                                                             {\newmthoarg[\defval{#2}{#1}]}
                                                                                                                                                            446 \DeclareRobustCommandx{\@snewmthoargsty}[2][2=]
                                                                                                                                                                                                            {\newmthoarg*[\defval{#2}{#1}]}
                                    \newmthpar ... to do!
                                                                                                                                                                                    • \newmthpar[mathrm] {Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}}} [Ext2] = "Name_{sub}^{sup} Ext1 | Par^{Ex^{Ex}}| Ext2" | Ext2
                                                                                                                                                                                    • \newmthpar[mathsf] {Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = "Name _{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2"
                                                                                                                                                                                   \bullet \ \texttt{\newmthpar[mathtt]{Name}[sub][sub][Ext1]{Par^{Ex^*}[Ex^*]}} \ [\texttt{Ext2}] = \texttt{``Name}_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \texttt{'`Name}_{sub}^{sup} Ext2 \texttt{'`Name}_{sub}^{sub} Ext2 \texttt{'`Name}_{sub}^{sub} Ext2 \texttt{'`Name}_{sub}^{sub} Ext2 \texttt{'`Name}_{sub}^{sub} Ext2 \texttt{'`Name}_{sub}^{sub} Ext2 \texttt{'``Name}_{sub}^{sub} Ext2 \texttt{'``Name}_{sub}^{sub} Ext2 \texttt{'``Name}_{sub}^{sub} Ext2 \texttt{'``Name}_{sub}^{sub} Ext2 \texttt{'```Name}_{sub}^{sub} Ext2 \texttt{'```Name}_{sub}^{sub} Ext2 \texttt{'```Name}_{sub}^{sub} Ext2 \texttt{'```Name}_{sub}^{sub} Ext2 \texttt{'```Name}_{sub}^{sub} Ext2 \texttt{'```Name}_{sub}^{sub} Ext2 \texttt{'````Name}_{sub}^{sub} Ext2 \texttt{'````Name}_{sub}^{sub} E
                                                                                                                                                                                    • \newmthpar*[mathrm] {Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = "Name _{sub}^{sup} Ext1[Par^{Ex^{Ex}}] Ext2"
                                                                                                                                                                                     \bullet \texttt{\newmthpar*[mathsf]{Name}[sub][sup][Ext1]{Par^{Ex^{}}}} [Ext2] = \texttt{\normalfont{Name}} Ext1[Par^{Ex^{Ex}}] Ext2 \texttt{\normalfont{Name}} Ext2 
                                                                                                                                                                                    • \newmthpar*[mathtt]{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = "Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
                                                                                                                                                            448 \DeclareRobustCommand{\newmthpar}
                                                                                                                                                                                                             {\@ifstar{\@snewmthpar}{\@newmthpar}}
                                                                                                                                                            450 \DeclareRobustCommandx{\Onewmthpar}[7][1=, 3=, 4=, 5=, 7=]
                                                                                                                                                                                                               {\newmth[#1]{#2}[#3][#4][\argmid{#5\!\left[}{#6}{\right]\arglef{\!}{#7}}]}
                                                                                                                                                            452 \DeclareRobustCommandx{\@snewmthpar}[7][1=, 3=, 4=, 5=, 7=]
                                                                                                                                                                                                            {\newmth[#1]{#2}[#3][#4][\argmid{#5[}{#6}{]#7}]}
       \newmthparsty ... to do!
                                                                                                                                                                                     \bullet \mathtt{Name}_{sub}^{sup}[\mathtt{Sub}][\mathtt{Sup}][\mathtt{Ext1}] \\ \{\mathtt{Par}^{\{\mathtt{Ex}^{\}}\}}[\mathtt{Ext2}] = \mathtt{``Name}_{sub}^{sup}Ext1 \\ \left[\mathtt{Par}^{\mathtt{Ex}^{Ex}}\right] \\ Ext2 \\ \mathtt{``Att2} \\ \mathtt{``Name}_{sub}^{sup}Ext1 \\ \mathtt{``Att2} \\ \mathtt{``Name}_{sub}^{sup}Ext1 \\ \mathtt{``Att2} \\ \mathtt{``Att2
                                                                                                                                                                                    • \newmthparsty{mathrm}[mathsf]{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}][Ext2] = "Name _{sub}^{sup}Ext1|Par^{Ex^{Ex}}|Ext2"
                                                                                                                                                                                  • \newmthparsty*{mathrm}{Name}[sub][sup] [Ext1]{Par^{Ex^{Ex}}}[Ext2] = "Name_{cub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2"
```

• \newmthparsty\*{mathrm} [mathsf] {Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = "Name  $_{sub}^{sup} Ext1 [Par^{Ex^{Ex}}] Ext2$ "
• \newmthparsty\*{mathrm} [mathtt] {Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = "Name  $_{sub}^{sup} Ext1 [Par^{Ex^{Ex}}] Ext2$ "

```
454 \DeclareRobustCommand{\newmthparsty}
                                                                          {\@ifstar{\@snewmthparsty}{\@newmthparsty}}
                                                            456 \DeclareRobustCommandx{\Onewmthparsty}[2][2=]
                                                            457 {\newmthpar[\defval{#2}{#1}]}
                                                            458 \DeclareRobustCommandx{\@snewmthparsty}[2][2=]
                                                                             {\newmthpar*[\defval{#2}{#1}]}
          \newmthopar ... to do!
                                                                     • \newmthopar[mathrm] {Name} [sub] [sup] [Par^{Ex^{Ex}}] = "Name_{sub}^{sup} [Par^{Ex^{Ex}}]"
                                                                      \bullet \ \texttt{\ \ } \ \texttt{\ \ \ } \ \texttt{\ \ }} \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\ \ \ } \ \texttt{\ \ } \ \texttt{\ \ \ } \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\ \ \ } \ \texttt{\ \ }} \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ } \ \texttt{\ \ }} \ \texttt{\  \  }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\ \ }} \ \texttt{\  }} \ \texttt{\ \ }} \ \texttt{\  }} \ \texttt{\ \ } \texttt{\ \ }} \ \texttt{\ \ } \texttt{\ \ }} \ \texttt{\ \ }} \
                                                                      \bullet \verb| \newmthopar*[mathrm]{Name}[sub][sup][Par^{Ex^{2}}] = "Name^{sup}_{sub}[Par^{Ex^{Ex}}]" 
                                                                     • \newmthopar*[mathsf]{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]"
                                                                           460 \DeclareRobustCommand{\newmthopar}
                                                                               {\@ifstar{\@snewmthopar}{\@newmthopar}}
                                                            462 \DeclareRobustCommandx{\Qnewmthopar}[5][1=, 3=, 4=, 5=]
                                                                               {\newmthpar[#1]{#2}[#3][#4][]{#5}[]}
                                                            464 \DeclareRobustCommandx{\@snewmthopar}[5][1=, 3=, 4=, 5=]
                                                                              {\newmthpar*[#1]{#2}[#3][#4][]{#5}[]}
\newmthoparsty ... to do!
                                                                     • \newmthoparsty{mathrm}{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]"
                                                                      \bullet \ \texttt{\ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ } \ \texttt{\ \ \ } \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ } \ \texttt{\ \ \ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ \ } \ \texttt{\ \ \ } \ \texttt{\ \ \
                                                                     • \newmthoparsty*{mathrm}{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{cub}^{sup}[Par^{Ex^{Ex}}]"
                                                                      \bullet \verb| \newmthoparsty*{mathrm}[mathsf]{Name}[sub][sup][Par^{Ex^{Ex}}]] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]" 
                                                                      \bullet \verb| \newmthoparsty*{mathrm}[mathtt]{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]" 
                                                            466 \DeclareRobustCommand{\newmthoparsty}
                                                                              {\@ifstar{\@snewmthoparsty}{\@newmthoparsty}}
                                                            468 \DeclareRobustCommandx{\@newmthoparsty}[2][2=]
                                                                              {\text{\ensuremath} \{ \text{\ensuremath} \{ \text{\ensuremath} \{ \} \} \} \}
                                                            470 \DeclareRobustCommandx{\@snewmthoparsty}[2][2=]
                                                                               {\newmthopar*[\defval{#2}{#1}]}
              \mthsubsup ... to do!
                                                           472 \DeclareRobustCommand{\mthsubsup}[2]
                                                                             {\empchk{#1}{_{#1}}\empchk{#2}{^{#2}}}
                                                            \mth ... to do!
                                                                     • \mathbb{Sup}[Sup][Ext] = "Name^{sup}_{sub}Ext"
                                                                     • \mathbf{Name}_{sub}^{sup}[\mathbf{Ext}] = \mathbf{Name}_{sub}^{sup}Ext
                                                                     • \mathcal{E}_{sub}[Sub][Sup][Ext] = \mathcal{E}_{sub}[Sub][Sup][Ext]
                                                                     • \mth*{Name}[sub][sup][Ext] = "Name_{sub}^{sup}Ext"
                                                                     • \mathfrak{m}th*[\mathtt{mathtt}]{\mathtt{Name}}[\mathtt{sub}][\mathtt{sup}][\mathtt{Ext}] = \mathtt{Name}^{sup}_{sub}Ext
                                                            475 \DeclareRobustCommand{\mth}
                                                                         {\@ifstar{\newmthsty*{\mthsty}}{\newmthsty{\mthsty}}}
                         \mtharg ... to do!
```

```
• \mtharg[mathtt] {Name} [sub] [sup] [Ext1] {Arg^{Ex^{Ex}}}} [Ext2] = "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"
                                                              \bullet \ \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \  }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \  } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\  }} \texttt{\ \ 
                                                              • \mtharg*[mathtt] {Name} [sub] [sup] [Ext1] {Arg^{Ex^{Ex}}}} [Ext2] = "Name _{sub}^{sup} Ext1(Arg^{Ex^{Ex}})Ext2"
                                                   477 \DeclareRobustCommand{\mtharg}
                                                                         {\@ifstar{\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}}] = "Name_{sub}^{sup} (Arg^{Ex^{Ex}})"
                                                              • \mthoarg[mathtt] {Name} [sub] [sup] [Arg^{Ex^{Ex}}] = "Name_{sub}^{sup} \left(Arg^{Ex^{Ex}}\right)"
                                                              • \mthoarg*{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{cub}^{sup}(Arq^{Ex^{Ex}})"
                                                              • \mthoarg*[mathbf]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup}(Arg^{Ex^{Ex}})"
                                                              • \mthoarg*[mathtt]{Name}[sub][sup][Arg^{Ex^{Ex}}] = "Name_{sub}^{sup}(Arg^{Ex^{Ex}})"
                                                  479 \DeclareRobustCommand{\mthoarg}
                                                                           {\@ifstar{\newmthoargsty*{\mthsty}}}{\newmthoargsty{\mthsty}}}
    \mthpar ... to do!
                                                             • \mthpar{Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = "Name_{sub}^{sup} Ext1 [Par^{Ex^{Ex}}] Ext2"
                                                              \bullet \texttt{ \normalfont{Mame}[sub][sup][Ext1]{Par^{Ex^{\{Ex\}}\}}[Ext2]} = "Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2" 
                                                              • \mthpar*[mathtt] {Name} [sub] [sup] [Ext1] {Par^{Ex^{2}}} [Ext2] = "Name _{sub}^{sup} Ext1[Par^{Ex^{Ex}}] Ext2"
                                                  481 \DeclareRobustCommand{\mthpar}
                                                                         {\@ifstar{\newmthparsty*{\mthsty}}}{\newmthparsty{\mthsty}}}
\mthopar ... to do!
                                                             • \mthopar{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]"
                                                              • \mthopar[mathbf] {Name} [sub] [sup] [Par^{Ex^{Ex}}] = "Name_{sub}^{sup} | Par^{Ex^{Ex}}|"
                                                             \bullet \  \, \texttt{\bar{Ex^{Ex}}} = \texttt{\bar{Name}} \\ [sub] \\ [sub] \\ [par^{\{Ex^{\{Ex\}}\}}] = \texttt{\bar{Name}} \\ [sub] \\ [par^{Ex^{Ex}}] \\ [par^{Ex}] \\ [par^{Ex^{Ex}}] \\ [par^{Ex^{Ex}}] \\ [par^{Ex^{Ex}}] \\ [
                                                              • \mthopar*{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]"
                                                              • \mthopar*[mathbf]{Name}[sub][sup][Par^{Ex^{Ex}}] = "Name_{sub}^{sup}[Par^{Ex^{Ex}}]"
                                                               \bullet \texttt{ \  \  } \texttt{ \  \  \  } \texttt{ \  \  \  } \texttt{ \  \  } 
                                                   483 \DeclareRobustCommand{\mthopar}
                                                                           {\@ifstar{\newmthoparsty*{\mthsty}}{\newmthoparsty{\mthsty}}}
    \mthsty ... to do!
                                                  485 \newcommand{\mthsty}
                                                  487 %%*****
    \cmdmth ... to do!
```

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

```
• \cmdmth{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
                                                                                                                                               \mbox{\tt Name} [	ext{\tt Sub}] [	ext{\tt Sup}] [	ext{\tt Ext}] = \mbox{\tt Name}_{sub}^{sup} Ext
                                                                                                                                               \verb|\mbox| \verb| Mame| = \verb| Sub| = \verb| Name| = \verb| Name| = \verb| Sub| = \verb| Name| = \verb| Name| = \verb| Sub| = \verb| Name| = Name| =
                                                                                                            488 \DeclareRobustCommand{\cmdmth}[1]
                                                                                                                                          {\csdef{mth#1}%
                                                                                                                                                                      {\@ifstar{\newmthsty*{mthsty#1}}}{\newmthsty{mthsty#1}}}}
                                                                                                            490
      \cmdmtharg ... to do!
                                                                                                                               • \cmdmtharg{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
                                                                                                                                             \verb|\mathrace| www and {\tt Name} [sub] [sup] [Ext1] {\tt Arg^{Ex^{Ex}}} ] [Ext2] = {\tt Name}_{sub}^{sup} Ext1 \Big( Arg^{Ex^{Ex}} \Big) Ext2 = {\tt Name}_{sub}^{sup} Ext2 = {\tt N
                                                                                                                                             \verb| That is a constant of the constant of the
                                                                                                             491 \DeclareRobustCommand{\cmdmtharg}[1]
                                                                                                                                                     {\csdef{mtharg#1}%
                                                                                                                                                                      {\@ifstar{\newmthargsty*{mthsty#1}}}{\newmthargsty{mthsty#1}}}
                                                                                                             493
\cmdmthoarg ... to do!
                                                                                                                               • \cmdmthoarg{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
                                                                                                                                             \verb|\mbox| \verb|\mbox| | [Sup] [Arg^{Ex^{*}}] = \verb|\mbox| | [Arg^{E_x^{Ex}}] = \verb|\mbox| | [Arg^{E_x^
                                                                                                                                             \verb|\mbox| \mbox{ $\mathbb{E}^{sup}$ [Sup] [Arg^{Ex^{Ex}}] = \mathbb{N}$ and $\sup_{sub} (Arg^{Ex^{Ex}})$ }
                                                                                                            494 \DeclareRobustCommand{\cmdmthoarg}[1]
                                                                                                                                             {\csdef{mthoarg#1}%
                                                                                                            496
                                                                                                                                                                      {\@ifstar{\newmthoargsty*{mthsty#1}}}{\newmthoargsty{mthsty#1}}}}
      \cmdmthpar ... to do!
                                                                                                                               • \cmdmthpar{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
                                                                                                                                             \verb| mthparNewCmd*{Name}[sub][sup][Ext1]{Par^{Ex^{-}}{Ex}}] Ext2] = \verb| Name| sub| Ext1[Par^{Ex^{-}}] Ext2
                                                                                                            497 \DeclareRobustCommand{\cmdmthpar}[1]
                                                                                                                                               {\csdef{mthpar#1}%
                                                                                                                                                                      {\@ifstar{\newmthparsty*{mthsty#1}}}{\newmthparsty{mthsty#1}}}
                                                                                                            499
\c to do!
                                                                                                                                • \cmdmthopar{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
                                                                                                                                             500 \DeclareRobustCommand{\cmdmthopar}[1]
                                                                                                                                                   {\csdef{mthopar#1}%
                                                                                                                                                                     {\@ifstar{\newmthoparsty*{mthsty#1}}}{\newmthoparsty{mthsty#1}}}}
                                                                                                            502
      \cmdmthall ... to do!
                                                                                                                                • \cmdmthall{NewCmd}; \newcommand{mthstyNewCmd}{\mathtt};
                                                                                                                                               \verb|\mbox| \verb| Sub| [sup] [Ext] = \verb|\mbox| \verb| Same | sub| |
                                                                                                                                             \mathsf{N} = 
                                                                                                                                             \verb| mthparNewCmd{Name}[sub][sup][Ext1]{Par^{Ex^{}}}[Ext2] = \verb| Name|^{sup}_{sub}Ext1 \Big| Par^{Ex^{Ex}} \Big| Ext2 \Big| Ext2 \Big| = ext2 \Big| Ex
                                                                                                                                             503 \DeclareRobustCommand{\cmdmthall}[1]
                                                                                                                                               {\cmdmth{#1}\cmdmtharg{#1}\cmdmthoarg{#1}\cmdmthpar{#1}\cmdmthopar{#1}}
```

```
\usrmth ... to do!
                                                                             • \usrmth{cmdName}{Suf}{};
                                                                                     \column{4}{c} 
                                                                                      \column{4}{c} {\tt mdNameSuf*} = cmdName
                                                                                      \usrmth{cmdName}{Suf}{arg};
                                                                                     \label{eq:cmdName} $$ \operatorname{Arg}^{Ex^{Ex}}$ = cmdName \Big(Arg^{Ex^{Ex}}\Big) $$
                                                                                     \verb|\cmdNameSuf*{Arg^{Ex^{Ex}}}| = cmdName(Arg^{Ex^{Ex}})
                                                                                     \usrmth{cmdName}{Suf}{par};
                                                                                     \verb|\cmdNameSuf{Par^{Ex^{Ex}}}| = cmdName \Big| Par^{Ex^{Ex}}
                                                                                     \verb|\cmdNameSuf*{Par^{Ex^{Ex}}}| = cmdName[Par^{Ex^{Ex}}]|
                                                                               \usrmth{cmdName}{Suf}{} [newName];
                                                                                      \colonerright 
                                                                                      \column{1}{c} 
                                                                                     \usrmth{cmdName}{Suf}{arg}[newName];
                                                                                     \verb|\cmdNameSuf{Arg^{Ex^{Ex}}}| = newName\Big(Arg^{Ex^{Ex}}\Big)
                                                                                     \verb|\cmdNameSuf*{Arg^{Ex^{Ex}}}| = newName(Arg^{Ex^{Ex}})|
                                                                                     \usrmth{cmdName}{Suf}{par}[newName];
                                                                                     \verb|\cmdNameSuf*{Par^{Ex^{}}}| = newName[Par^{Ex^{Ex}}]|
                                                                   506 \DeclareRobustCommandx{\usrmth}[4][4=]
                                                                                       {\csdef{#1#2}{\%}}
                                                                   508
                                                                                                  \@ifstar%
                                                                                                          {\csname mth#3\endcsname*{\defval{#4}{#1}}}%
                                                                   509
                                                                                                          {\csname mth#3\endcsname{\defval{#4}{\#1}}}}
                                                                   510
                                                                   \usrmthlatlow ... to do!
                                                                   512 \DeclareRobustCommandx{\usrmthlatlow}[4][4=]
                                                                                      {\usrmth{#1}{#2}{#3}[#4]\seqoflatlow{#1#2}{mth#3}}
\usrmthlatupp ... to do!
                                                                   514 \verb|\DeclareRobustCommandx{\usrmthlatupp}[4][4=]
                                                                  515 \{ \text{1}{\#2}{\#3}[\#4] \
\usrmthlatlet ... to do!
                                                                   516 \DeclareRobustCommandx{\usrmthlatlet}[4][4=]
                                                                  517 {\usrmth{#1}{#2}{#3}[#4]\seqoflatlet{#1#2}{mth#3}}
\usrmthgrklow ... to do!
                                                                   518 \DeclareRobustCommandx{\usrmthgrklow}[4][4=]
                                                                                   {\usrmth{#1}{#2}{#3}[#4]\seqofgrklow{#1#2}{mth#3}}
\usrmthgrkupp ... to do!
                                                                   520 \DeclareRobustCommandx{\usrmthgrkupp}[4][4=]
                                                                                   {\mbox{\normalfine} \{\mbox{\normalfine} \{\mbox{\normalfine} \{\mbox{\normalfine} \}\} \}}
                                                                  521
\usrmthgrklet ... to do!
                                                                   522 \DeclareRobustCommandx{\usrmthgrklet}[4][4=]
                                                                                    {\usrmth{#1}{#2}{#3}[#4]\seqofgrklet{#1#2}{mth#3}}
            \usrmthlow ... to do!
                                                                  524 \DeclareRobustCommandx{\usrmthlow}[4][4=]
                                                                                        {\mbox{\normalfill} {\#2}{\#3}[\#4] \seqoflow{\#1\#2}{mth\#3}}
            \usrmthupp ... to do!
                                                                  526 \DeclareRobustCommandx{\usrmthupp}[4][4=]
                                                                                    {\usrmth{#1}{#2}{#3}[#4]\seqofupp{#1#2}{mth#3}}
```

```
\usrmthlet ... to do!
                                528 \DeclareRobustCommandx{\usrmthlet}[4][4=]
                                529 {\usrmth{#1}{#2}{#3}[#4]\seqoflet{#1#2}{mth#3}}
                                534 \iftxtgen@
   \txtdef, ... to do!
                                     ullet \txtdef{Name}[sub][sup][Ext] = Name_{sub}^{sup}Ext
                                     ullet \txtargdef{Name}[sub][sup][Ext1]{Arg}[Ext2] = Name_{sub}^{sup}Ext1(Arg)Ext2
                                      \qquad \qquad \texttt{(Sub) [sup] [Ext1] \{Par\} [Ext2]} = Name_{sub}^{sup} Ext1[Par] Ext2 
                                 535 %% Style for Definitions
                                536 \t \t formalfont \t txtstydef} {\normalfont \t txtstydef} \end{tabular}
       \cmdtxtdef ... to do!
                                     • \cmdtxtdef{cmdName};
                                        \colon colon col
                                     • \cmdtxtdef{cmdName}[newName];
                                        \verb|\cmdName[sub][sub][ext]| = newName_{sub}^{sub}ext
                                 537 \DeclareRobustCommandx{\cmdtxtdef}[2][2=]
                                538 {\usrtxt{#1}{}{def}[#2]}
 \cmdtxtargdef ... to do!
                                     • \cmdtxtargdef{cmdName};
                                        \verb|\cmdName[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
                                     • \cmdtxtargdef{cmdName}[newName];
                                        \cmdName[sub][sub][ext1]\{arg\}[ext2] = newName_{sub}^{sub}ext1(arg)ext2
                                539 \DeclareRobustCommandx{\cmdtxtargdef}[2][2=]
                                540 {\usrtxt{#1}{}{argdef}[#2]}
\cmdtxtoargdef ... to do!
                                     \cmdtxtoargdef{cmdName};
                                        \colon = cmdName[sub][sub][arg] = cmdName_{sub}^{sub}(arg)
                                     • \cmdtxtoargdef{cmdName}[newName];
                                         \colon = [sub][sub][arg] = newName_{sub}^{sub}(arg)
                                541 \DeclareRobustCommandx{\cmdtxtoargdef}[2][2=]
                                542 {\usrtxt{#1}{}{oargdef}[#2]}
 \cmdtxtpardef ... to do!
                                     \cmdtxtpardef{cmdName};
                                        \verb|\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
                                 543 \DeclareRobustCommandx{\cmdtxtpardef}[2][2=]
                                        {\usrtxt{#1}{}{pardef}[#2]}
\cmdtxtopardef ... to do!
                                     \cmdtxtopardef{cmdName};
                                        \cmdName[sub][sub][par] = cmdName_{sub}^{sub}[par]
                                     \cmdtxtopardef{cmdName}[newName];
                                        \verb|\cmdName[sub][sub][par]| = newName_{sub}^{sub}[par]|
                                545 \DeclareRobustCommandx{\cmdtxtopardef}[2][2=]
                                546 {\usrtxt{#1}{}{opardef}[#2]}
   \txtabr, ... to do!
```

```
ullet \txtabr{Name} [sub] [sup] [Ext] = Name_{
m sub}^{
m sup} Ext
                                          • \txtargabr{Name} [sub] [sup] [Ext1] {Arg} [Ext2] = Name_{\mathrm{sub}}^{\mathrm{sup}} Ext1(Arg) Ext2
                                          • \txtparabr{Name}[sub][sup][Ext1]\{Par\}[Ext2] = Name_{sub}^{sup}Ext1[Par]Ext2
                                    547 %% Style for Abbreviations
                                    548 \mbox{\cmdtxtall{abr}\newcommand{\txtstyabr}{\cm}}
        \cmdtxtabr ... to do!
                                          • \cmdtxtabr{cmdName};
                                              \colon colon col
                                          • \cmdtxtabr{cmdName}[newName];
                                              \verb|\cmdName[sub][sub][ext]| = newName_{\rm sub}^{\rm sub}ext
                                    549 \DeclareRobustCommandx{\cmdtxtabr}[2][2=]
                                             {\usrtxt{#1}{}{abr}[#2]}
  \cmdtxtargabr ... to do!
                                          • \cmdtxtargabr{cmdName};
                                              \verb|\cmdName[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
                                          • \cmdtxtargabr{cmdName}[newName];
                                              \cmdName[sub][sub][ext1]{arg}[ext2] = newName_{sub}^{sub}ext1(arg)ext2
                                    551 \DeclareRobustCommandx{\cmdtxtargabr}[2][2=]
                                    552 {\usrtxt{#1}{}{argabr}[#2]}
\cmdtxtoargabr ... to do!
                                          • \cmdtxtoargabr{cmdName};
                                              \verb|\cmdName[sub][sub][arg]| = cmdName^{\rm sub}_{\rm sub}(arg)
                                          \cmdtxtoargabr{cmdName} [newName];
                                              \cmdName[sub][sub] [arg] = newName_{\text{sub}}^{\text{sub}}(arg)
                                    553 \DeclareRobustCommandx{\cmdtxtoargabr}[2][2=]
                                    554 {\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_{\text{sub}}^{\text{sub}} ext1/par/ext2
                                    555 \DeclareRobustCommandx{\cmdtxtparabr}[2][2=]
                                             {\usrtxt{#1}{}{parabr}[#2]}
\cmdtxtoparabr ... to do!
                                          • \cmdtxtoparabr{cmdName};
                                              \cmdName[sub][sub][par] = cmdName_{sub}^{sub}/par
                                          • \cmdtxtoparabr{cmdName}[newName];
                                              \verb|\cmdName[sub][sub][par]| = newName_{\rm sub}^{\rm sub}/par|
                                     557 \DeclareRobustCommandx{\cmdtxtoparabr}[2][2=]
                                             {\usrtxt{#1}{}{oparabr}[#2]}
                                    \txtname, ... to do!
                                          • \text{txtname}\{\text{Name}\}[\text{sub}][\text{Ext}] = \text{Name}^{\text{SUP}}_{\text{SUB}}Ext
                                          • \txtargname{Name}[sub][sup][Ext1]{Arg}[Ext2] = Name_{SUB}^{SUP}Ext1(Arg)Ext2
                                           \qquad \qquad \text{$$ \text{txtparname}[\text{Sup}][\text{Sup}][\text{Ext1}]$ $$ [\text{Ext2}] = \text{Name}_{\text{Sub}}^{\text{SUP}} \text{Ext1}[\text{Par}] \text{Ext2} $$ } 
                                    560 %% Style for Names
                                    561 \cmdtxtall{name}\newcommand{\txtstyname}{\normalfont\mdseries\scshape\sffamily}
      \cmdtxtname ... to do!
```

```
\cmdtxtname{cmdName};
                                                                                                                 \cmdName[sub][sub][ext] = CMDNAME_{SUB}^{SUB}EXT
                                                                                                         \cmdtxtname{cmdName}[newName];
                                                                                                                 562 \DeclareRobustCommandx{\cmdtxtname}[2][2=]
                                                                                                             {\usrtxt{#1}{}{name}[#2]}
     \cmdtxtargname ... to do!
                                                                                                        \cmdtxtargname{cmdName};
                                                                                                                 \verb|\cmdName[sub][sub][ext1]{arg}[ext2] = CMDNAME_{SUB}^{SUB}EXT1(ARG)EXT2
                                                                                                        • \cmdtxtargname{cmdName}[newName];
                                                                                                                 564 \DeclareRobustCommandx{\cmdtxtargname}[2][2=]
                                                                                                               {\usrtxt{#1}{}{argname}[#2]}
                                                                                    ... to do!
\cmdtxtoargname
                                                                                                        • \cmdtxtoargname{cmdName};
                                                                                                                 \colon = CMDNAME_{SUB}^{SUB}(ARG)
                                                                                                        • \cmdtxtoargname{cmdName}[newName];
                                                                                                                 \colon 
                                                                                           566 \DeclareRobustCommandx{\cmdtxtoargname}[2][2=]
                                                                                                                 {\usrtxt{#1}{}{oargname}[#2]}
     \cmdtxtparname ... to do!
                                                                                                        \cmdtxtparname{cmdName};
                                                                                                                 \verb|\cmdName[sub][sub][ext1]{par}[ext2] = CMDNAME_{SUB}^{SUB}EXT1[PAR]EXT2|
                                                                                                        • \cmdtxtparname{cmdName}[newName];
                                                                                                                 \verb|\cmdName[sub][sub][ext1]{par}[ext2] = \verb|\cmdName[sub][sub][ext1][PAR] = NEWNAME_{SUB}^{SUB} = NEWNAME_{SUB}^{SUB}^{SUB} = NEWNAME_{SUB}^{SUB} = NEWNAME_{SUB}^{SUB} = NEWNAME_{SUB}^{SUB} = NEWNAME_{SUB}^{SUB} = NEWNAME_{SUB}^{SUB} = NEWNAM
                                                                                           568 \DeclareRobustCommandx{\cmdtxtparname}[2][2=]
                                                                                                                 {\usrtxt{#1}{}{parname}[#2]}
\cmdtxtoparname ... to do!
                                                                                                        \cmdtxtoparname{cmdName};
                                                                                                                 \colon 
                                                                                                        • \cmdtxtoparname{cmdName}[newName];
                                                                                                                 \colon = NEWNAME_{SUB}^{SUB}[PAR]
                                                                                           570 \DeclareRobustCommandx{\cmdtxtoparname}[2][2=]
                                                                                           571 {\usrtxt{#1}{}{oparname}[#2]}
               \txtcom, ... to do!
                                                                                                        • \text{txtcom{Name}}[\text{sub}][\text{sup}][\text{Ext}] = \text{Name}_{\text{SUB}}^{\text{SUP}} \text{Ext}
                                                                                                        • \t xtargcom{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAME_{SUB}^{SUP}EXT1(ARG)EXT2
                                                                                                        • \txtparcom{Name}[sub][sup][Ext1]{Par}[Ext2] = NAME_SUB_EXT1[PAR]EXT2
                                                                                           572 %% Style for Complexities
                                                                                           573 \cmdtxtall{com}\newcommand{\txtstycom}{\normalfont\mdseries\scshape\rmfamily}
                          \cmdtxtcom ... to do!
                                                                                                        \cmdtxtcom{cmdName};
                                                                                                                 \cmdName[sub][sub][ext] = CMDNAME_{SUB}^{SUB}EXT
                                                                                                        • \cmdtxtcom{cmdName}[newName];
                                                                                                                 \colon 
                                                                                           574 \DeclareRobustCommandx{\cmdtxtcom}[2][2=]
                                                                                           575 {\usrtxt{#1}{}{com}[#2]}
          \cmdtxtargcom ... to do!
                                                                                                        \cmdtxtargcom{cmdName};
                                                                                                                 \label{lem:cmdName} $$ \operatorname{[sub][sub][ext1]}_{arg}[ext2] = \operatorname{CMDNAME}_{SUB}^{SUB} \operatorname{EXT1}(\operatorname{ARG}) \operatorname{EXT2} $$
```

```
\cmdtxtargcom{cmdName} [newName];
                                            \verb|\cmdName[sub][sub][ext1]{arg}[ext2] = \verb|\cmdName[sub][sub][ext1](ARG)EXT2|
                                   576 \DeclareRobustCommandx{\cmdtxtargcom}[2][2=]
                                            {\usrtxt{#1}{}{argcom}[#2]}
\cmdtxtoargcom ... to do!
                                        \cmdtxtoargcom{cmdName};
                                            \colon = CMDNAME_{SUB}^{SUB}(ARG)
                                        • \cmdtxtoargcom{cmdName}[newName];
                                            \verb|\cmdName[sub][sub][arg]| = NEWNAME^{SUB}_{SUB}(ARG)
                                   578 \DeclareRobustCommandx{\cmdtxtoargcom}[2][2=]
                                            {\usrtxt{#1}{}{oargcom}[#2]}
  \cmdtxtparcom ... to do!
                                        \cmdtxtparcom{cmdName};
                                            \verb|\cmdName[sub][sub][ext1]{par}[ext2] = CMDNAME_{SUB}^{SUB}EXT1[PAR]EXT2|
                                        • \cmdtxtparcom{cmdName} [newName];
                                            \verb|\cmdName[sub][sub][ext1]{par}[ext2] = \verb|\newName[sub][sub][ext1]{par}[ext2]
                                   580 \DeclareRobustCommandx{\cmdtxtparcom}[2][2=]
                                           {\usrtxt{#1}{}{parcom}[#2]}
\cmdtxtoparcom ... to do!
                                        • \cmdtxtoparcom{cmdName};
                                            \colon = CMDNAME_{SUB}^{SUB}[PAR]
                                        \cmdtxtoparcom{cmdName}[newName];
                                            \colon = NEWNAME_{SUB}^{SUB}[PAR]
                                   582 \DeclareRobustCommandx{\cmdtxtoparcom}[2][2=]
                                            {\usrtxt{#1}{}{oparcom}[#2]}
                                   584 \fi
                                   589 \ifmthgen@
  \mthname, ... to do!
                                        \bullet \ \texttt{\ \ } \texttt{[sub][sup][Ext]} = \mathcal{NAME}^{sup}_{sub}Ext
                                        • \mthargname*{NAME}[sub][sup][Ext1]{Arg^{Ex^{}}}[Ext2] = \mathcal{NAME}^{sup}_{sub}Ext1(Arg^{Ex^{Ex}})Ext2
                                         \bullet \ \texttt{\normalfont{MME}[sub][sub][Ext1][Par^{Ex^{*}}]} \ [\texttt{Ext2}] \ = \ \mathcal{NAME}^{sup}_{sub} Ext1 \ \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub}_{sub} Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext2 \\ = \ \mathcal{NAME}^{sub}_{sub} Ext2 \\ = \ \mathcal{NAME}^{sub}_
                                        590 %% Style for Names
                                  591 \cmdmthall{name}\newcommand{\mthstyname}{\mathcal}
      \AName. ...
                                 \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}
                                  592 \seqoflatupp{Name}{mthname}
      \cmdmthname ... to do!
                                        • \cmdmthname{CMDNAME};
                                            \CMDNAMEName[sub][sub][ext] = \mathcal{CMDNAME}_{sub}^{sub}ext
                                        • \cmdmthname{cmdName}[NEWNAME];
                                            \verb|\cmdNameName[sub][sub][ext]| = \mathcal{NEWNAME}^{sub}_{sub}ext
                                   593 \DeclareRobustCommandx{\cmdmthname}[2][2=]
                                   594 {\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
                                            595 \DeclareRobustCommandx{\cmdmthargname}[2][2=]
                                                       {\usrmth{#1}{Name}{argname}[#2]}
\cmdmthoargname ... to do!
                                                  • \cmdmthoargname{CMDNAME};
                                                      \CMDNAMEName[sub][sub][arg] = \mathcal{CMDNAME}_{sub}^{sub}(arg)
                                                  • \cmdmthoargname{cmdName}[NEWNAME];
                                                      \verb|\cmdNameName[sub][sub][arg]| = \mathcal{NEWNAME}_{sub}^{sub}(arg)
                                            597 \DeclareRobustCommandx{\cmdmthoargname}[2][2=]
                                                       {\usrmth{#1}{Name}{oargname}[#2]}
  \cmdmthparname ... to do!
                                                  \cmdmthparname{CMDNAME};
                                                      \verb|\CMDNAMEName[sub][sub][ext1]{par}[ext2] = \mathcal{CMDNAME}_{sub}^{sub}ext1[par]ext2
                                                  • \cmdmthparname{cmdName}[NEWNAME];
                                                       \verb|\cmdNameName[sub][sub][ext1]{par}[ext2] = \mathcal{NEWNAME}^{sub}_{sub}ext1[par]ext2
                                            599 \DeclareRobustCommandx{\cmdmthparname}[2][2=]
                                                      {\usrmth{#1}{Name}{parname}[#2]}
                                       ... to do!
\cmdmthoparname
                                                  • \cmdmthoparname{CMDNAME};
                                                       \CMDNAMEName[sub][sub][par] = \mathcal{CMDNAME}_{sub}^{sub}[par]
                                                  • \cmdmthoparname{cmdName}[NEWNAME];
                                                       \cmdNameName[sub] [sub] [par] = \mathcal{NEWNAME}_{sub}^{sub}[par]
                                            601 \DeclareRobustCommandx{\cmdmthoparname}[2][2=]
                                                      {\usrmth{#1}{Name}{oparname}[#2]}
       \mthfam, ... to do!
                                                  • \mthfam{NAME}[sub][sup][Ext] = \mathcal{N} \mathcal{A} \mathcal{M} \mathcal{E}_{sub}^{sup} Ext
                                                  • \mthargfam{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = \mathcal{NAME}_{sub}^{sup}Ext1\left(Arg^{Ex^{Ex}}\right)Ext2
                                                  • \mthparfam{NAME} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = \mathcal{N}\mathcal{A}\mathcal{M}\mathcal{E}^{sup}_{sub}Ext1 \Big[Par^{Ex^{Ex}}\Big]Ext2
                                                  \bullet \  \  \, \texttt{\baselinestylembers} \  \, \texttt{\baselinestylemb
                                            603 %% Style for Families
                                           604 \cmdmthall{fam}\newcommand{\mthstyfam}{\mathscr}
                                          \mathscr{A}, \mathscr{B}, \mathscr{C}, \mathscr{D}, \mathscr{E}, \mathscr{F}, \mathscr{G}, \mathscr{H}, \mathscr{I}, \mathscr{J}, \mathscr{K}, \mathscr{L}, \mathscr{M}, \mathscr{N}, \mathscr{O}, \mathscr{P}, \mathscr{Q}, \mathscr{R}, \mathscr{S}, \mathscr{T}, \mathscr{U}, \mathscr{V}, \mathscr{W}, \mathscr{X}, \mathscr{Y}, \mathscr{Z}
                                           605 \seqoflatupp{Fam}{mthfam}
            \cmdmthfam ... to do!
                                                  \cmdmthfam{CMDNAME};
                                                       \verb|\CMDNAMEFam[sub][sub][ext]| = \mathscr{CMDNAMEFam}[sub][sub][ext]| = \mathscr{CMDNAMEFam}[sub][sub][ext]|
                                                  • \cmdmthfam{cmdName}[NEWNAME]:
                                                       \cmdNameFam[sub][sub][ext] = \mathcal{NEWNAME}_{sub}^{sub}ext
                                            606 \DeclareRobustCommandx{\cmdmthfam}[2][2=]
                                                     {\usrmth{#1}{Fam}{fam}[#2]}
    \cmdmthargfam ... to do!
```

```
• \cmdmthargfam{cmdName}[NEWNAME];
                          \label{lem:cmdNameFam} $$ \operatorname{Sub} [\operatorname{sub}] [\operatorname{sub}] [\operatorname{ext1}] = \mathcal{NEWNAME}_{sub}^{sub} ext1(arg) ext2 $$
                     608 \DeclareRobustCommandx{\cmdmthargfam}[2][2=]
                         {\usrmth{#1}{Fam}{argfam}[#2]}
\cmdmthoargfam ... to do!
                        \cmdmthoargfam{CMDNAME};
                          \verb|\CMDNAMEFam[sub][sub][arg]| = \mathscr{CMDNAMEFam}[sub][sub][arg]| = \mathscr{CMDNAMEFam}[sub][sub][sub][arg]|
                        • \cmdmthoargfam{cmdFam}[NEWNAME];
                          \cmbox{cmdFamFam[sub] [sub] [arg]} = \mathcal{NEWNAME}^{sub}_{sub}(arg)
                     610 \DeclareRobustCommandx{\cmdmthoargfam}[2][2=]
                     611 {\usrmth{#1}{Fam}{oargfam}[#2]}
 \cmdmthparfam ... to do!
                        • \cmdmthparfam{CMDNAME};
                          \CMDNAMEFam[sub][sub][ext1]\{par\}[ext2] = \mathscr{CMDNAMEFam}[sub][sub][ext1][par]ext2
                        • \cmdmthparfam{cmdName}[NEWNAME];
                          \verb|\cmdNameFam[sub][sub][ext1]{par}[ext2] = \mathscr{NEWNMME}^{sub}_{sub}ext1[par]ext2
                     612 \DeclareRobustCommandx{\cmdmthparfam}[2][2=]
                           {\usrmth{#1}{Fam}{parfam}[#2]}
\cmdmthoparfam ... to do!
                        • \cmdmthoparfam{CMDNAME};
                          \CMDNAMEFam[sub][sub][par] = \mathscr{CMDNAMEFam}[sub][par]
                        • \cmdmthoparfam{cmdFam}[NEWNAME];
                          \verb|\cmdFamFam[sub][sub][par]| = \mathcal{NEWNAME}_{sub}^{sub}[par]|
                     614 \DeclareRobustCommandx{\cmdmthoparfam}[2][2=]
                          {\usrmth{#1}{Fam}{oparfam}[#2]}
  \mthcls, ... to do!
                        • \mthcls{NAME}[sub][sup][Ext] = \mathcal{NAME}_{sub}^{sup}Ext
                        • \mthargcls{NAME}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = \mathcal{NAME}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                        • \mthparcls{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \mathcal{NAME}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                        • \mthparcls*{NAME}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = \mathcal{NAME}_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                     616 \%\% Style for Classes
                    617 \cmdmthall{cls}\newcommand{\mthstycls}{\matheus}
     \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}
                    618 \seqoflatupp{Cls}{mthcls}
     \cmdmthcls ... to do!
                        \cmdmthcls{CMDNAME};
                          \verb|\CMDNAMECls[sub][sub][ext]| = \verb|\CMDNAME|^{sub}_{sub}ext|
                        • \cmdmthcls{cmdName}[NEWNAME];
                          \cmdNameCls[sub][sub][ext] = NEWNAME_{sub}^{sub}ext
                     619 \DeclareRobustCommandx{\cmdmthcls}[2][2=]
                     620 {\usrmth{#1}{Cls}{cls}[#2]}
 \cmdmthargcls ... to do!
                        \cmdmthargcls{CMDNAME};
                          \verb|\CMDNAMECls[sub][sub][ext1]{arg}[ext2] = \verb|\CMDNAME|^{sub}_{sub}ext1(arg)ext2
```

\cmdmthargfam{CMDNAME};

```
• \cmdmthargcls{cmdName}[NEWNAME];
                                                                                       \verb|\cmdNameCls[sub][sub][ext1]{arg}[ext2] = NEWNAME_{sub}^{sub}ext1(arg)ext2
                                                                     621 \DeclareRobustCommandx{\cmdmthargcls}[2][2=]
                                                                                     {\usrmth{#1}{Cls}{argcls}[#2]}
\cmdmthoargcls ... to do!
                                                                                \cmdmthoargcls{CMDNAME};
                                                                                      \CMDNAMEC1s[sub][sub][arg] = \mathcal{CMDNAME}_{sub}^{sub}(arg)
                                                                                \cmdmthoargcls{cmdCls}[NEWNAME];
                                                                                      \verb|\cmdClsCls[sub][sub][arg]| = NEWNAME_{sub}^{sub}(arg)
                                                                     623 \DeclareRobustCommandx{\cmdmthoargcls}[2][2=]
                                                                    624 {\usrmth{#1}{Cls}{oargcls}[#2]}
   \cmdmthparcls ... to do!
                                                                                \cmdmthparcls{CMDNAME};
                                                                                      \CMDNAMECls[sub][sub][ext1]{par}[ext2] = \mathcal{CMDNAME}_{sub}^{sub}ext1[par]ext2
                                                                                • \cmdmthparcls{cmdName}[NEWNAME];
                                                                                       \cmdNameCls[sub][sub][ext1]{par}[ext2] = NEWNAME_{sub}^{sub}ext1[par]ext2
                                                                      625 \DeclareRobustCommandx{\cmdmthparcls}[2][2=]
                                                                                    {\usrmth{#1}{Cls}{parcls}[#2]}
\cmdmthoparcls ... to do!
                                                                               • \cmdmthoparcls{CMDNAME};
                                                                                      \CMDNAMECls[sub][sub][par] = \mathcal{CMDNAME}_{sub}^{sub}[par]
                                                                                • \cmdmthoparcls{cmdCls}[NEWNAME];
                                                                                      \verb|\cmdClsCls[sub][sub][par]| = \verb|NEWNAME|_{sub}^{sub}[par]|
                                                                     627 \DeclareRobustCommandx{\cmdmthoparcls}[2][2=]
                                                                    628 {\usrmth{#1}{Cls}{oparcls}[#2]}
       \mthsig, ... to do!
                                                                               • \mthsig{Name}[sub][sup][Ext] = \mathcal{N}ame_{sub}^{sup}Ext
                                                                                • \mthargsig{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                                                • \mthargsig*{Name}[sub][sup][Ext1]{Arg^{Ex^{2}}}[Ext2] = \Re e^{sup}_{sub}Ext1(Arg^{Ex^{Ex}})Ext2
                                                                                \bullet \  \  \, \texttt{ \membrack}[Sub][Sub][Ext1] = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex^{Ex}} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ ame_{sub}^{sup} Ext2 \Big[ Par^{Ex} \Big] \\ = \mathcal{N} \\ 
                                                                               \bullet \  \  \, \texttt{\bare} = \texttt{\bare} =
                                                                      629 %% Style for Signatures
                                                                     630 \cmdmthall{sig}\newcommand{\mthstysig}{\mathpzc}
                \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,\; \chi,\; y,\; z
                                                                  \mathcal{A},~\mathcal{B},~\mathcal{C},~\mathcal{D},~\mathcal{E},~\mathcal{F},~\mathcal{G},~\mathcal{H},~I,~\mathcal{I},~\mathcal{K},~\mathcal{L},~\mathcal{M},~\mathcal{N},~\mathcal{O},~\mathcal{P},~\mathcal{Q},~\mathcal{R},~\mathcal{S},~\mathcal{T},~\mathcal{U},~\mathcal{V},~\mathcal{W},~\mathcal{X},~\mathcal{Y},~\mathcal{Z}
                                                                  \alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, o, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega
                                                                     631 \seqoflatlet{Sig}{mthsig}\seqofgrklow{Sig}{mthsig}
                \cmdmthsig ... to do!
                                                                               • \cmdmthsig{cmdName};
                                                                                      \colon dNameSig[sub][sub][ext] = cmdName_{sub}^{sub}ext
                                                                                • \cmdmthsig{cmdName}[NewName];
                                                                                      \verb|\cmdNameSig[sub][sub][ext]| = \textit{NewName}^{sub}_{sub} ext|
                                                                     632 \DeclareRobustCommandx{\cmdmthsig}[2][2=]
                                                                     633 {\usrmth{#1}{Sig}{sig}[#2]}
   \cmdmthargsig ... to do!
                                                                               • \cmdmthargsig{cmdName};
```

 $\verb|\cmdNameSig[sub][sub][ext1]{arg}[ext2] = \textit{cmdName}_{sub}^{sub}ext1(arg)ext2$ 

```
• \cmdmthargsig{cmdName}[NewName];
                                                                                                  \verb|\cmdNameSig[sub][sub][ext1]{arg}[ext2] = \textit{NewName}^{sub}_{sub}ext1(arg)ext2
                                                                              634 \DeclareRobustCommandx{\cmdmthargsig}[2][2=]
                                                                                                 {\usrmth{#1}{Sig}{argsig}[#2]}
\cmdmthoargsig ... to do!
                                                                                          \cmdmthoargsig{cmdName};
                                                                                                 \verb|\cmdNameSig[sub][sub][arg]| = \textit{cmdName}_{sub}^{sub}(arg)
                                                                                          • \cmdmthoargsig{cmdSig}[NewName];
                                                                                                 \verb|\cmdSigSig[sub][sub][arg]| = \textit{NewName}^{sub}_{sub}(arg)
                                                                              636 \DeclareRobustCommandx{\cmdmthoargsig}[2][2=]
                                                                                                 {\usrmth{#1}{Sig}{oargsig}[#2]}
    \cmdmthparsig ... to do!
                                                                                          \cmdmthparsig{cmdName};
                                                                                                 \label{lem:cmdNameSig} $$ \operatorname{[sub][sub][ext1][par][ext2]} = cmd \operatorname{Name}_{sub}^{sub} ext1[par] ext2 $$
                                                                                          • \cmdmthparsig{cmdName}[NewName];
                                                                                                  \cmdNameSig[sub][sub][ext1]\{par\}[ext2] = NewName_{sub}^{sub}ext1[par]ext2
                                                                               638 \DeclareRobustCommandx{\cmdmthparsig}[2][2=]
                                                                                               {\usrmth{#1}{Sig}{parsig}[#2]}
\cmdmthoparsig ... to do!
                                                                                         • \cmdmthoparsig{cmdName};
                                                                                                 \colon dNameSig[sub][sub][par] = cmdName_{sub}^{sub}[par]
                                                                                          • \cmdmthoparsig{cmdSig}[NewName];
                                                                                                 \verb|\cmdSigSig[sub][sub][par]| = \textit{NewName}^{sub}_{sub}[par]|
                                                                              640 \DeclareRobustCommandx{\cmdmthoparsig}[2][2=]
                                                                             641 {\usrmth{#1}{Sig}{oparsig}[#2]}
        \mthstr, ... to do!
                                                                                         • \mthstr{Name} [sub] [sup] [Ext] = \mathfrak{Name}_{sub}^{sup} Ext
                                                                                         • \mthargstr{Name} [sub] [sup] [Ext1] {Arg^{Ex^{Ex}}} [Ext2] = \mathfrak{Name}_{sub}^{sup} Ext1 \Big( Arg^{Ex^{Ex}} \Big) Ext2
                                                                                          • \mthargstr*{Name}[sub][sup][Ext1]{Arg^{Ex^{}}}[Ext2] = \mathfrak{Name}_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                                                         \bullet \  \  \, \texttt{ \mthparstr{Name}[sub][sup][Ext1]{Par^{Ex^{}}}} [Ext2] = \mathfrak{Name}^{sup}_{sub} Ext1 \Big[ Par^{Ex^{Ex}} \Big] Ext2 \\ = \mathfrak{Name}^{sup}_{sub} Ext2 \\ = \mathfrak{Name}^{sub}_{sub} Ext2 \\ = \mathfrak{Name}^{sub}_{sub}_{sub} Ext2 \\ = \mathfrak{Name}^{sub}_{sub} Ext2 \\ = \mathfrak{Name}^{sub}_{s
                                                                                         \bullet \  \  \, \texttt{\bare}[sub][sup][Ext1] \{ Par^{Ex^{-}}[Ext2] = \mathfrak{Name}_{sub}^{sup} Ext1[Par^{Ex^{Ex}}] Ext2] = \mathfrak{Name}_{sub}^{sup} Ext1[Par^{Ex^{Ex}}] Ext2 = \mathfrak{Name}_{sub}^{sup} Ext2[Par^{Ex^{Ex}}] Ext
                                                                              642 %% Style for Structures
                                                                              643 \mbox{ \mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{}\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{}\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{}\box{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbo
                  \aStr, ... to do!
                                                                          a, b, c, d, e, f, g, h, i, j, f, l, m, n, o, p, q, r, s, f, u, v, w, r, h, g
                                                                          \mathfrak{A},\,\mathfrak{B},\,\mathfrak{C},\,\mathfrak{D},\,\mathfrak{E},\,\mathfrak{F},\,\mathfrak{G},\,\mathfrak{H},\,\mathfrak{I},\,\mathfrak{I},\,\mathfrak{K},\,\mathfrak{L},\,\mathfrak{M},\,\mathfrak{N},\,\mathfrak{D},\,\mathfrak{P},\,\mathfrak{Q},\,\mathfrak{R},\,\mathfrak{S},\,\mathfrak{T},\,\mathfrak{U},\,\mathfrak{V},\,\mathfrak{W},\,\mathfrak{X},\,\mathfrak{Y},\,\mathfrak{J}
                                                                          \alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, \mathfrak{o}, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega
                                                                              644 \sqoflatlet{Str}{mthstr}\sqofgrklow{Str}{mthstr}
                  \cmdmthstr ... to do!
                                                                                         • \cmdmthstr{cmdName};
                                                                                                  \cmdNameStr[sub][sub][ext] = cmdMamesubext
                                                                                          • \cmdmthstr{cmdName}[NewName];
                                                                                                 \verb|\cmdNameStr[sub][sub][ext]| = \mathfrak{NewName}_{sub}^{sub} ext
                                                                              645 \DeclareRobustCommandx{\cmdmthstr}[2][2=]
                                                                              646 {\usrmth{#1}{Str}{str}[#2]}
    \cmdmthargstr ... to do!
                                                                                         • \cmdmthargstr{cmdName};
                                                                                                 \verb|\cmdNameStr[sub][sub][ext1]{arg}[ext2] = \verb|\cmdMame| sub ext1(arg)ext2|
```

```
• \cmdmthargstr{cmdName} [NewName];
                                                                                                            \verb|\cmdNameStr[sub][sub][ext1]{arg}[ext2] = \mathfrak{NewName}_{sub}^{sub}ext1(arg)ext2
                                                                                      647 \DeclareRobustCommandx{\cmdmthargstr}[2][2=]
                                                                                                            {\usrmth{#1}{Str}{argstr}[#2]}
\cmdmthoargstr ... to do!
                                                                                                   • \cmdmthoargstr{cmdName};
                                                                                                            \verb|\cmdNameStr[sub][sub][arg]| = cmd \mathfrak{Name}_{sub}^{sub}(arg)
                                                                                                   • \cmdmthoargstr{cmdStr}[NewName];
                                                                                                            \verb|\cmdStrStr[sub][sub][arg]| = \mathfrak{NewName}_{sub}^{sub}(arg)
                                                                                      649 \DeclareRobustCommandx{\cmdmthoargstr}[2][2=]
                                                                                                            {\usrmth{#1}{Str}{oargstr}[#2]}
    \cmdmthparstr ... to do!
                                                                                                   • \cmdmthparstr{cmdName};
                                                                                                            \verb|\cmdNameStr[sub][sub][ext1]{par}[ext2] = \verb|\cmdName|^{sub}_{sub}ext1[par]ext2|
                                                                                                   • \cmdmthparstr{cmdName}[NewName];
                                                                                                            \verb|\cmdNameStr[sub][sub][ext1]{par}[ext2] = \mathfrak{NewName}_{sub}^{sub}ext1[par]ext2
                                                                                      651 \DeclareRobustCommandx{\cmdmthparstr}[2][2=]
                                                                                                          {\usrmth{#1}{Str}{parstr}[#2]}
\cmdmthoparstr ... to do!
                                                                                                   • \cmdmthoparstr{cmdName};
                                                                                                            \verb|\cmdNameStr[sub][sub][par]| = \mathfrak{cmdName}_{sub}^{sub}[par]|
                                                                                                   • \cmdmthoparstr{cmdStr}[NewName];
                                                                                                            \colored \
                                                                                      653 \DeclareRobustCommandx{\cmdmthoparstr}[2][2=]
                                                                                                            {\usrmth{#1}{Str}{oparstr}[#2]}
         \mthset, ... to do!
                                                                                                   • \mthset{Name}[sub][sup][Ext] = Name_{sub}^{sup}Ext
                                                                                                   • \mthargset{Name} [sub] [sup] [Ext1] {Arg^{Ex^{Ex}}} [Ext2] = Name_{sub}^{sup} Ext1 (Arg^{Ex^{Ex}}) Ext2
                                                                                                   \bullet \ \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\ \ }} \texttt{\ \ } \texttt{\ \ }} \texttt{\  }} \texttt{\ \ }} \texttt{\  }} \texttt{\ \ }} \texttt{\  } \texttt{\ \ }} \texttt{\ \ 
                                                                                                   \bullet \  \, \texttt{\name} \  \, \texttt{\name
                                                                                                   655 %% Style for Sets
                                                                                     656 \cmdmthall{set}\newcommand{\mthstyset}{\mathrm}
                    \aSet, ... to do!
                                                                                 a,\,b,\,c,\,d,\,e,\,f,\,g,\,h,\,i,\,j,\,k,\,l,\,m,\,n,\,o,\,p,\,q,\,r,\,s,\,t,\,u,\,v,\,w,\,x,\,y,\,z
                                                                                  A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
                                                                                  \alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, o, \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
                                                                                     657 \seqoflet{Set}{mthset}
                    \cmdmthset ... to do!
                                                                                                   \cmdmthset{cmdName};
                                                                                                            \verb|\cmdNameSet[sub][sub][ext]| = cmdName_{sub}^{sub}ext
                                                                                                   • \cmdmthset{cmdName}[NewName];
                                                                                                            \cmdNameSet[sub][sub][ext] = NewName_{sub}^{sub}ext
                                                                                      658 \DeclareRobustCommandx{\cmdmthset}[2][2=]
                                                                                                        {\usrmth{#1}{Set}{set}[#2]}
    \cmdmthargset ... to do!
                                                                                                   \cmdmthargset{cmdName};
                                                                                                            \verb|\cmdNameSet[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
```

```
• \cmdmthargset{cmdName}[NewName];
                                                    \verb|\cmdNameSet[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                                         660 \DeclareRobustCommandx{\cmdmthargset}[2][2=]
                                                    {\usrmth{#1}{Set}{argset}[#2]}
\cmdmthoargset ... to do!
                                                \cmdmthoargset{cmdName};
                                                    \verb|\cmdNameSet[sub][sub][arg]| = cmdName_{sub}^{sub}(arg)
                                                • \cmdmthoargset{cmdSet}[NewName];
                                                    \verb|\cmdSetSet[sub][sub][arg]| = NewName_{sub}^{sub}(arg)
                                         662 \DeclareRobustCommandx{\cmdmthoargset}[2][2=]
                                                   {\usrmth{#1}{Set}{oargset}[#2]}
  \cmdmthparset ... to do!
                                                \cmdmthparset{cmdName};
                                                    \label{lem:lemma:emdName} $$\operatorname{sub}[\operatorname{sub}][\operatorname{sub}][\operatorname{ext1}] = \operatorname{cmdName}_{\operatorname{sub}}^{\operatorname{sub}} ext1[\operatorname{par}]ext2$
                                                • \cmdmthparset{cmdName}[NewName];
                                                    \cmdNameSet[sub][sub][ext1]{par}[ext2] = NewName_{sub}^{sub}ext1[par]ext2
                                          664 \DeclareRobustCommandx{\cmdmthparset}[2][2=]
                                                  {\usrmth{#1}{Set}{parset}[#2]}
\cmdmthoparset ... to do!
                                               • \cmdmthoparset{cmdName};
                                                    \colon dNameSet[sub][sub][par] = cmdName_{sub}^{sub}[par]
                                                • \cmdmthoparset{cmdSet}[NewName];
                                                    \verb|\cmdSetSet[sub][sub][par]| = NewName_{sub}^{sub}[par]|
                                         666 \DeclareRobustCommandx{\cmdmthoparset}[2][2=]
                                                   {\usrmth{#1}{Set}{oparset}[#2]}
  \cmdmthsetext ... to do!
                                         668 \DeclareRobustCommandx{\cmdmthsetext}[3][2=, 3=]
                                         669 {\cmdmthset{#1}[#2]\caselower[q]{#1}%
                                                  \usrmthlet{\thestring}{Sym}{sym}
                                                            [\defval{#3}{\defval{\empchk{#2}}{\lowercase{#2}}}{\thestring}}]%
                                                   \usrmthlet{\thestring}{Elm}{elm}
                                         672
                                         673
                                                            [\defval{#3}{\defval{\empchk{#2}}{\lowercase{#2}}}{\thestring}}]
    \mthrel, ... to do!
                                               • \mthrel{Name}[sub][sup][Ext] = Name_{sub}^{sup}Ext
                                                • \mthargrel{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name^{sup}_{sub}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^{sup}_{sub}Ext1[Par^{Ex^{Ex}}]Ext2
                                               \bullet \  \, \texttt{\colored} = Name \} \\ \texttt{\colored} = Name 
                                         674 %% Style for Relations
                                         675 \cmdmthall{rel}\newcommand{\mthstyrel}{\mathit}
         \aRel, ... to do!
                                       a,\ b,\ c,\ d,\ e,\ f,\ g,\ h,\ i,\ j,\ k,\ l,\ m,\ n,\ o,\ p,\ q,\ r,\ s,\ t,\ u,\ v,\ w,\ x,\ y,\ z
                                       A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, L, T, U, V, W, X, Y, Z
                                       \alpha,\,\beta,\,\gamma,\,\delta,\,\epsilon,\,\varepsilon,\,\zeta,\,\eta,\,\theta,\,\vartheta,\,\iota,\,\kappa,\,\varkappa,\,\lambda,\,\mu,\,\nu,\,\xi,\,o,\,\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
                                         676 \seqoflet{Rel}{mthrel}
         \cmdmthrel ... to do!
                                               • \cmdmthrel{cmdName};
                                                    \verb|\cmdNameRel[sub][sub][ext]| = cmdName_{sub}^{sub}ext
```

```
• \cmdmthrel{cmdName}[NewName];
                                                                     \colon dNameRel[sub][sub][ext] = NewName_{sub}^{sub}ext
                                                       677 \DeclareRobustCommandx{\cmdmthrel}[2][2=]
                                                                    {\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
                                                       679 \DeclareRobustCommandx{\cmdmthargrel}[2][2=]
                                                                    {\usrmth{#1}{Rel}{argrel}[#2]}
\cmdmthoargrel ... to do!
                                                               • \cmdmthoargrel{cmdName};
                                                                    \cmdNameRel[sub][sub][arg] = cmdName_{sub}^{sub}(arg)
                                                               • \cmdmthoargrel{cmdRel}[NewName];
                                                                    \verb|\cmdRelRel[sub][sub][arg]| = NewName_{sub}^{sub}(arg)
                                                       681 \DeclareRobustCommandx{\cmdmthoargrel}[2][2=]
                                                                  {\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];
                                                                    \verb|\cmdNameRel[sub][sub][ext1]{par}[ext2] = NewName_{sub}^{sub}ext1[par]ext2|
                                                       683 \DeclareRobustCommandx{\cmdmthparrel}[2][2=]
                                                                     {\usrmth{#1}{Rel}{parrel}[#2]}
\cmdmthoparrel ... to do!
                                                               • \cmdmthoparrel{cmdName};
                                                                    \cmdNameRel[sub][sub][par] = cmdName_{sub}^{sub}[par]
                                                               • \cmdmthoparrel{cmdRel}[NewName];
                                                                     \cmdRelRel[sub] [sub] [par] = NewName_{sub}^{sub}[par]
                                                       685 \DeclareRobustCommandx{\cmdmthoparrel}[2][2=]
                                                                    {\usrmth{#1}{Rel}{oparrel}[#2]}
      \mthfun, ... to do!
                                                               • \mathbb{N} [sub] [sup] [Ext] = \mathbb{N} = \mathbb{N}
                                                               • \mthargfun{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                               • \mthargfun*{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                               \bullet \  \, \texttt{\bar{Name}[sub][sup][Ext1][Par^{Ex^{*}}]} \  \, \texttt{\bar{Ext2}} = \  \, \texttt{\bar{Name}} \  \, \texttt{\bar{Ext1}[Par^{Ex^{Ex}}]} \  \, \texttt{\bar{Ext2}} = \  \, \texttt{\bar{Ext2}[Par^{Ex^{Ex}}]} \  \, \texttt{\bar{Ext2}[Par^{Ex^{Ex}}]}} \  \, \texttt{\bar{Ext2}[Par^{Ex^{Ex}}]} \  \, \texttt{\bar{Ext2}[Par^{Ex^{Ex}
                                                               • \mthparfun*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                                                       687 %% Style for Functions
                                                      688 \mbox{\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{}\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{}\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{}\box{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox
             \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
                                                    \alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, o, \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, P, P, \Sigma, \Sigma, T, \Upsilon, \Phi, \Phi, X, \Psi, \Omega
                                                       689 \seqoflet{Fun}{mthfun}
             \cmdmthfun ... to do!
                                                               \cmdmthfun{cmdName};
                                                                    \verb|\cmdNameFun[sub][sub][ext]| = \verb|\cmdName|^{sub}_{sub} ext|
```

```
• \cmdmthfun{cmdName} [NewName];
                                             \cmdNameFun[sub][sub][ext] = NewName_{sub}^{sub}ext
                                    690 \DeclareRobustCommandx{\cmdmthfun}[2][2=]
                                             {\usrmth{#1}{Fun}{fun}[#2]}
  \cmdmthargfun ... to do!
                                         • \cmdmthargfun{cmdName};
                                             \cmdNameFun[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
                                         • \cmdmthargfun{cmdName}[NewName];
                                             \cmdNameFun[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                                    692 \DeclareRobustCommandx{\cmdmthargfun}[2][2=]
                                             {\usrmth{#1}{Fun}{argfun}[#2]}
\cmdmthoargfun ... to do!
                                         • \cmdmthoargfun{cmdName};
                                             \colon = cmdNameFun[sub][sub][arg] = cmdName_{sub}^{sub}(arg)
                                         • \cmdmthoargfun{cmdFun}[NewName];
                                             \verb|\cmdFunFun[sub][sub][arg]| = \verb|\NewName|_{sub}^{sub}(arg)
                                    694 \DeclareRobustCommandx{\cmdmthoargfun}[2][2=]
                                            {\usrmth{#1}{Fun}{oargfun}[#2]}
  \cmdmthparfun ... to do!
                                         • \cmdmthparfun{cmdName};
                                             \cmdNameFun[sub][sub][ext1][par][ext2] = cmdName_{sub}^{sub}ext1[par]ext2
                                         • \cmdmthparfun{cmdName}[NewName];
                                             696 \DeclareRobustCommandx{\cmdmthparfun}[2][2=]
                                             {\usrmth{#1}{Fun}{parfun}[#2]}
\cmdmthoparfun ... to do!
                                         • \cmdmthoparfun{cmdName};
                                             \colon = \
                                         • \cmdmthoparfun{cmdFun}[NewName];
                                             \colon [sub] [sub] [par] = NewName_{sub}^{sub} [par]
                                    698 \DeclareRobustCommandx{\cmdmthoparfun}[2][2=]
                                             {\usrmth{#1}{Fun}{oparfun}[#2]}
    \mthsym, ... to do!
                                         • \mathbb{E}_{sub}[Sub][Sup][Ext] = \mathbb{E}_{sub}Ext
                                         • \mthargsym{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                         \bullet \  \, \texttt{\bar{Ext1}[Ext1]} = \mathtt{Name}_{sub}^{sup}Ext1\Big[Par^{Ex^{Ex}}\}\\ \texttt{\bar{Ext2}} = \mathtt{Name}_{sub}^{sup}Ext1\Big[Par^{Ex^{Ex}}\Big]Ext2\\ \texttt{\bar{Ext2}} = \mathtt{\bar{Ext2}}
                                         • \mthparsym*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                                    700 %% Style for Symbols
                                    701 \cmdmthall{sym}\newcommand{\mthstysym}{\mathtt}
        \asym, ... to do!
                                  a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
                                  A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
                                  \alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, o, \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
                                    702 \seqoflet{Sym}{mthsym}
        \cmdmthsym ... to do!
                                         \cmdmthsym{cmdName};
                                             \cmdNameSym[sub][sub][ext] = cmdName_{sub}^{sub}ext
```

```
• \cmdmthsym{cmdName}[NewName];
                                                                              \colon colon col
                                                              703 \DeclareRobustCommandx{\cmdmthsym}[2][2=]
                                                                             {\usrmth{#1}{Sym}{sym}[#2]}
   \cmdmthargsym ... to do!
                                                                       • \cmdmthargsym{cmdName};
                                                                             \verb|\cmdNameSym[sub][sub][ext1]{arg}[ext2] = \verb|\cmdName|^{sub}_{sub}ext1(arg)ext2
                                                                       • \cmdmthargsym{cmdName}[NewName];
                                                                              \c MameSym[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                                                               705 \DeclareRobustCommandx{\cmdmthargsym}[2][2=]
                                                                             {\usrmth{#1}{Sym}{argsym}[#2]}
\cmdmthoargsym ... to do!
                                                                       • \cmdmthoargsym{cmdName};
                                                                             • \cmdmthoargsym{cmdSym}[NewName];
                                                                             \verb|\cmdSymSym[sub][sub][arg]| = \verb|\NewName|_{sub}^{sub}(arg)
                                                               707 \DeclareRobustCommandx{\cmdmthoargsym}[2][2=]
                                                                             {\usrmth{#1}{Sym}{oargsym}[#2]}
   \cmdmthparsym ... to do!
                                                                       • \cmdmthparsym{cmdName};
                                                                             \cmdNameSym[sub][sub][ext1]{par}[ext2] = cmdName_{sub}^{sub}ext1[par]ext2
                                                                       • \cmdmthparsym{cmdName}[NewName];
                                                                             \verb|\cmdNameSym[sub][sub][ext1]{par}[ext2] = \verb|\cmdNamesub| ext1[par]ext2|
                                                               709 \DeclareRobustCommandx{\cmdmthparsym}[2][2=]
                                                                                {\usrmth{#1}{Sym}{parsym}[#2]}
\cmdmthoparsym ... to do!
                                                                       • \cmdmthoparsym{cmdName};
                                                                             • \cmdmthoparsym{cmdSym}[NewName];
                                                                              \colon dSymSym[sub][sub][par] = NewName_{sub}^{sub}[par]
                                                               711 \DeclareRobustCommandx{\cmdmthoparsym}[2][2=]
                                                                             {\usrmth{#1}{Sym}{oparsym}[#2]}
       \mthelm, ... to do!
                                                                       • \mthelm{Name}[sub][sup][Ext] = Name_{sub}^{sup}Ext
                                                                        \bullet \  \  \, \texttt{Name} = \texttt{Name} = \texttt{Sub} = \texttt{Sub}
                                                                       • \mthargelm*{Name}[sub][sup][Ext1]{Arg^{Ex^{-}}{Ex}}}[Ext2] = Name^{sup}_{sub}Ext1(Arg^{Ex^{-}})Ext2
                                                                       \bullet \  \, \texttt{\bar{Name}[sub][sup][Ext1][Par^{Ex^{*}}]} \  \, \texttt{\bar{Ext2}} = Name_{sub}^{sup} Ext1 \left\lceil Par^{Ex^{Ex}} \right\rceil Ext2
                                                                       • \mthparelm*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                                                               713 %% Style for Elements
                                                             714 \cmdmthall{elm}\newcommand{\mthstyelm}{\mathnormal}
              \aElm, ... to do!
                                                          a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
                                                           A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
                                                           \alpha, \beta, \gamma, \delta, \epsilon, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \varkappa, \lambda, \mu, \nu, \xi, o, \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
                                                             715 \seqoflet{Elm}{mthelm}
              \cmdmthelm ... to do!
                                                                       \cmdmthelm{cmdName};
                                                                              \verb|\cmdNameElm[sub][sub][ext]| = cmdName_{sub}^{sub}ext
```

```
• \cmdmthelm{cmdName}[NewName];
                          \colon = NewName_{sub}^{sub}[sub][ext] = NewName_{sub}^{sub}ext
                     716 \DeclareRobustCommandx{\cmdmthelm}[2][2=]
                          {\usrmth{#1}{Elm}{elm}[#2]}
   \cmdmthargelm ... to do!
                        \cmdmthargelm{cmdName};
                          \verb|\cmdNameElm[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
                        • \cmdmthargelm{cmdName}[NewName];
                           \verb|\cmdNameElm[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                     718 \DeclareRobustCommandx{\cmdmthargelm}[2][2=]
                          {\usrmth{#1}{Elm}{argelm}[#2]}
  \cmdmthoargelm ... to do!
                        \cmdmthoargelm{cmdName};
                          \colon = cmdNameElm[sub][sub][arg] = cmdName_{sub}^{sub}(arg)
                        • \cmdmthoargelm{cmdElm}[NewName];
                          \colon = NewName_{sub}^{sub}(arg) = NewName_{sub}^{sub}(arg)
                      720 \DeclareRobustCommandx{\cmdmthoargelm}[2][2=]
                          {\usrmth{#1}{Elm}{oargelm}[#2]}
   \cmdmthparelm ... to do!
                        • \cmdmthparelm{cmdName};
                          \verb|\cmdNameElm[sub][sub][ext1]{par}[ext2] = cmdName_{sub}^{sub}ext1[par]ext2|
                        • \cmdmthparelm{cmdName}[NewName];
                          \verb|\cmdNameElm[sub][sub][ext1]{par}[ext2] = NewName_{sub}^{sub}ext1[par]ext2
                     722 \DeclareRobustCommandx{\cmdmthparelm}[2][2=]
                          {\usrmth{#1}{Elm}{parelm}[#2]}
  \cmdmthoparelm ... to do!
                        • \cmdmthoparelm{cmdName};
                          \verb|\cmdNameElm[sub][sub][par]| = cmdName_{sub}^{sub}[par]|
                        • \cmdmthoparelm{cmdElm}[NewName];
                          \colon = NewName_{sub}^{sub}[par] = NewName_{sub}^{sub}[par]
                      724 \DeclareRobustCommandx{\cmdmthoparelm}[2][2=]
                          {\usrmth{#1}{Elm}{oparelm}[#2]}
   \cmdmthsymelm ... to do!
                        • \cmdmthsymelm{cmdName};
                          \verb|\cmdNameSym[sub][sub][ext]| = \verb|\cmdName|_{sub}^{sub} ext|
                          \colon dNameElm[sub][sub][ext] = cmdName^{sub}_{sub}ext
                        • \cmdmthsymelm{cmdName}[NewName];
                           \verb|\cmdNameSym[sub][sub][ext]| = \verb|\NewName|_{sub}^{sub}ext|
                           \cmdNameElm[sub][sub][ext] = NewName_{sub}^{sub}ext
                      727 \DeclareRobustCommandx{\cmdmthsymelm}[2][2=]
                            {\cmdmthsym{#1}[#2]%
                      729
                           \cmdmthelm{#1}[#2]}
\cmdmthargsymelm ... to do!
                        • \cmdmthargsymelm{cmdName};
                          \verb|\cmdNameSym[sub][sub][ext1]{arg}[ext2] = \verb|\cmdName||_{sub}^{sub} ext1(arg) ext2
                           \verb|\cmdNameElm[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
                        • \cmdmthargsymelm{cmdName}[NewName];
                          \verb|\cmdNameSym[sub][sub][ext1]{arg}[ext2] = \verb|\cmdName|^{sub}_{sub}ext1(arg)ext2
                          \verb|\cmdNameElm[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
```

```
730 \DeclareRobustCommandx{\cmdmthargsymelm}[2][2=]
                                                                                                  {\cmdmthargsym{#1}[#2]%
                                                                              732
                                                                                                  \cmdmthargelm{#1}[#2]}
\cmdmthoargsymelm ... to do!
                                                                                       \cmdmthoargsymelm{cmdName};
                                                                                               \cmbox{\cmdNameSym[sub][sub][arg]} = cmdName_{sub}^{sub}(arg)
                                                                                               \verb|\cmdNameElm[sub][sub][arg]| = cmdName_{sub}^{sub}(arg)
                                                                                       • \cmdmthoargsymelm{cmdName}[NewName];
                                                                                              \colon = \
                                                                                              \colon = NewName_{sub}^{sub}(arg) = NewName_{sub}^{sub}(arg)
                                                                              733 \DeclareRobustCommandx{\cmdmthoargsymelm}[2][2=]
                                                                                                  {\cmdmthoargsym{#1}[#2]%
                                                                                                  \cmdmthoargelm{#1}[#2]}
   \cmdmthparsymelm ... to do!
                                                                                       \cmdmthparsymelm{cmdName};
                                                                                               \verb|\cmdNameSym[sub][sub][ext1]{par}[ext2] = \verb|\cmdName|^{sub}_{sub}ext1[par]ext2|
                                                                                               \colone{local} \col
                                                                                       • \cmdmthparsymelm{cmdName}[NewName];
                                                                                               \verb|\cmdNameSym[sub][sub][ext1]{par}[ext2] = \verb|\cmdNames|^{sub}_{sub}ext1[par]ext2
                                                                                               \colone{local} \col
                                                                              736 \DeclareRobustCommandx{\cmdmthparsymelm}[2][2=]
                                                                                                  {\cmdmthparsym{#1}[#2]%
                                                                                                  \cmdmthparelm{#1}[#2]}
                                                                              738
\colone{thoparsymelm} ... to do!
                                                                                       \cmdmthoparsymelm{cmdName};
                                                                                               \cmbox{\cmdNameSym[sub][sub][par]} = cmdName_{sub}^{sub}[par]
                                                                                               \cmdNameElm[sub][sub][par] = cmdName_{sub}^{sub}[par]
                                                                                       • \cmdmthoparsymelm{cmdName}[NewName];
                                                                                               \verb|\cmdNameSym[sub][sub][par]| = \verb|\NewName|_{sub}^{sub}[par]|
                                                                                               \verb|\cmdNameElm[sub][sub][par]| = NewName_{sub}^{sub}[par]|
                                                                             739 \DeclareRobustCommandx{\cmdmthoparsymelm}[2][2=]
                                                                                                  {\cmdmthoparsym{#1}[#2]%
                                                                                                  \cmdmthoparelm{#1}[#2]}
                                                                             \mthluop, ... to do!
                                                                                        \bullet \ \texttt{\bar{luop{\oplus}[sub][sup][Ext]}} = \oplus_{sub}^{sup} Ext ]
                                                                                       • \mthlbop{\oplus}[sub][sup][Ext] = \bigoplus_{sub}^{sup}Ext
                                                                             743 %% Style for \LaTex Operators
                                                                              744 \cmdmth{luop}\newcommand{\mthstyluop}[1]{\textstyle\mathop{#1}}
                                                                             745 \mbox{cmdmth{lbop}\newcommand{\mbstylbop}[1]{\textstyle}mathbin{#1}}
   \cmdmthluop, ... to do!
                                                                                       • \cmdmthluop{cmdName};
                                                                                               \colone{cmdNameUOp[sub][sub][ext]} = cmdName^{sub}_{sub} ext
                                                                                       • \cmdmthluop{cmdName}[\oplus];
                                                                                               \colon = 0
                                                                                       • \cmdmthlbop{cmdName};
                                                                                              \colon dNameBOp[sub][sub][ext] = cmdName_{sub}^{sub}ext
                                                                                       • \cmdmthlbop{cmdName}[\oplus];
                                                                                              \colon = 0 [sub] [sub] [ext] = \oplus_{sub}^{sub} ext
                                                                              746 \DeclareRobustCommandx{\cmdmthluop}[2][2=]
                                                                                                  {\usrmth{#1}{UOp}{luop}[#2]}
                                                                              748 \DeclareRobustCommandx{\cmdmthlbop}[2][2=]
                                                                                                {\usrmth{#1}{BOp}{1bop}[#2]}
```

```
\mthlrel ... to do!
                                                                      • \mthlrel{\preceq}[sub][sup][Ext] = \leq_{sub}^{sup} Ext
                                                            750 %% Style for \LaTex Relations
                                                            751 \cmdmth{lrel}\newcommand{\mthstylrel}{\mathrel}
           \cmdmthlrel ... to do!
                                                                      • \cmdmthlrel{cmdName};
                                                                            \cmdNameRel[sub][sub][ext] = cmdName_{sub}^{sub} ext
                                                                      • \cmdmthlrel{cmdName}[\preceq];
                                                                             \cmdNameRel[sub][sub][ext] = \leq_{sub}^{sub} ext
                                                              752 \DeclareRobustCommandx{\cmdmthlrel}[2][2=]
                                                                          {\usrmth{#1}{Rel}{lrel}[#2]}
                                                             \mthsnt, ... to do!
                                                                      • \mthsnt{Name} [sub] [sup] [Ext] = Name_{sub}^{sup}Ext
                                                                     \bullet \  \  \, \texttt{Name}[sub][sup][Ext1] \{ \texttt{Arg} \  \  \, \texttt{Ex} \} \} [Ext2] = \mathsf{Name}^{sup}_{sub} Ext1 \Big( Arg^{Ex^{Ex}} \Big) Ext2 \Big) = \mathsf{Name}^{sup}_{sub} Ext2 \Big( Arg^{Ex^{Ex}} \Big) \Big( Arg^{Ex} \Big) \Big( Arg^{E
                                                                      • \mthargsnt*{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                                      \bullet \  \, \texttt{\bar{Name}[sub][sub][Ext1][Par^{Ex^{Ex}}]} \  \, [\texttt{Ext2}] = \  \, \texttt{\bar{Name}} \  \, Ext1 \  \, \Big[ Par^{Ex^{Ex}} \Big] \  \, Ext2 \
                                                                      \bullet \  \  \, \texttt{\bare}\{\texttt{Name}\}[\texttt{sub}][\texttt{sup}][\texttt{Ext1}]\{\texttt{Par}^{\texttt{\ensuremath{\{}Ex$^{\ensuremath{\}}\}}}[\texttt{Ext2}]} = \mathsf{Name}^{sup}_{sub}Ext1[Par^{Ex^{Ex}}]Ext2]
                                                              755 %% Style for Sentences
                                                             756 \cmdmthall{snt}\newcommand{\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,\,\varepsilon,\,\zeta,\,\eta,\,\theta,\,\vartheta,\,\iota,\,\kappa,\,\varkappa,\,\lambda,\,\mu,\,\nu,\,\xi,\,\mathsf{o},\,\pi,\,\varpi,\,\rho,\,\varrho,\,\sigma,\,\varsigma,\,\tau,\,\upsilon,\,\phi,\,\varphi,\,\chi,\,\psi,\,\omega
                                                          \mathsf{A},\,\mathsf{B},\,\mathsf{\Gamma},\,\Delta,\,\mathsf{E},\,\mathsf{E},\,\mathsf{Z},\,\mathsf{H},\,\Theta,\,\varTheta,\,\mathsf{I},\,\mathsf{K},\,\mathsf{K},\,\Lambda,\,\mathsf{M},\,\mathsf{N},\,\Xi,\,\mathsf{O},\,\Pi,\,\varPi,\,\mathsf{P},\,\mathsf{P},\,\Sigma,\,\varSigma,\,\mathsf{T},\,\Upsilon,\,\Phi,\,\varPhi,\,\mathsf{X},\,\Psi,\,\Omega
                                                             757 \seqoflet{Snt}{mthsnt}
              \cmdmthsnt ... to do!
                                                                      \cmdmthsnt{cmdName};
                                                                             \colon = cmdNameSnt[sub][sub][ext] = cmdName<math>_{sub}^{sub}ext
                                                                      • \cmdmthsnt{cmdName}[NewName];
                                                                             \verb|\cmdNameSnt[sub][sub][ext]| = \verb|\NewName|_{sub}^{sub} ext|
                                                             758 \DeclareRobustCommandx{\cmdmthsnt}[2][2=]
                                                                            {\usrmth{#1}{Snt}{snt}[#2]}
   \cmdmthargsnt ... to do!
                                                                      \cmdmthargsnt{cmdName};
                                                                            \cmdNameSnt[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2
                                                                      • \cmdmthargsnt{cmdName}[NewName];
                                                                            \c MameSnt[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                                                              760 \DeclareRobustCommandx{\cmdmthargsnt}[2][2=]
                                                                          {\usrmth{#1}{Snt}{argsnt}[#2]}
\cmdmthoargsnt ... to do!
                                                                      \cmdmthoargsnt{cmdName};
                                                                            \colon = cmdNameSnt[sub][sub][arg] = cmdName<math>_{sub}^{sub}(arg)
                                                                      • \cmdmthoargsnt{cmdName}[NewName];
                                                                            \verb|\cmdNameSnt[sub][sub][arg]| = \verb|\NewName|_{sub}^{sub}(arg)
                                                             762 \DeclareRobustCommandx{\cmdmthoargsnt}[2][2=]
                                                             763 {\usrmth{#1}{Snt}{oargsnt}[#2]}
   \cmdmthparsnt ... to do!
```

```
\cmdmthparsnt{cmdName};
                                                                 \label{lem:lemma:sub:ext1} $$ \operatorname{CmdNameSnt}[\operatorname{sub}][\operatorname{sub}][\operatorname{ext1}][\operatorname{par}][\operatorname{ext2}] = \operatorname{cmdName}_{\operatorname{sub}}^{\operatorname{sub}} ext1[\operatorname{par}] ext2 $$
                                                            • \cmdmthparsnt{cmdName}[NewName];
                                                                 \verb|\cmdNameSnt[sub][sub][ext1]{par}[ext2] = \verb|\NewName|^{sub}_{sub}ext1[par]ext2|
                                                    764 \DeclareRobustCommandx{\cmdmthparsnt}[2][2=]
                                                               {\usrmth{#1}{Snt}{parsnt}[#2]}
\cmdmthoparsnt ... to do!
                                                           • \cmdmthoparsnt{cmdName};
                                                                 \verb|\cmdNameSnt[sub][sub][par]| = \verb|\cmdNameSnt[sub][par]|
                                                            • \cmdmthoparsnt{cmdName}[NewName];
                                                                 \colon = NewNameSub[par] = NewName_{sub}^{sub}[par]
                                                    766 \DeclareRobustCommandx{\cmdmthoparsnt}[2][2=]
                                                               {\usrmth{#1}{Snt}{oparsnt}[#2]}
     \mthfrm, ... to do!
                                                           \bullet \ \  \  \, \texttt{Name} \texttt{[sub][sup][Ext]} = Name_{sub}^{sup}Ext
                                                            • \mthargfrm{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                            \bullet \  \, \texttt{\normalfrm*{Name}[sub][sup][Ext1]{Arg^{Ex^{-}{Ex}}}} \  \, [\texttt{Ext2}] = Name_{sub}^{sup} Ext1(Arg^{Ex^{-Ex}}) Ext2 = Name_{sub}^{sub} Ext1(Arg^{Ex^{-Ex}}) Ext2(Arg^{Ex^{-Ex}}) Ext2(Arg^{Ex^{-Ex}}) Ext2(Arg^{Ex^{-Ex}}) Ext2(Arg^{Ex^{-Ex}}) Ext2(Arg^{Ex^{-Ex}}) Ext2(Arg^{Ex^{-Ex}}) E
                                                            • \mthparfrm{Name} [sub] [sup] [Ext1] {Par^{Ex^{Ex}}} [Ext2] = Name_{sub}^{sup} Ext1 [Par^{Ex^{Ex}}] Ext2
                                                            \bullet \  \  \, \texttt{\bare}[sub][sub][sup][Ext1][Par^{Ex^*}]Ext2] = Name^{sup}_{sub}Ext1[Par^{Ex^{Ex}}]Ext2] = Name^{sup}_{sub}Ext1[Par^{Ex^{Ex}}]Ext2
                                                    768 %% Style for Formulae
                                                   769 \cmdmthall{frm}\newcommand{\mthstyfrm}{\mathit}
            \aFrm, ... to do!
                                                 a,\;b,\;c,\;d,\;e,\;f,\;g,\;h,\;i,\;j,\;k,\;l,\;m,\;n,\;o,\;p,\;q,\;r,\;s,\;t,\;u,\;v,\;w,\;x,\;y,\;z
                                                 A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
                                                 \alpha,\,\beta,\,\gamma,\,\delta,\,\epsilon,\,\varepsilon,\,\zeta,\,\eta,\,\theta,\,\vartheta,\,\iota,\,\kappa,\,\varkappa,\,\lambda,\,\mu,\,\nu,\,\xi,\,o,\,\pi,\,\varpi,\,\rho,\,\varrho,\,\sigma,\,\varsigma,\,\tau,\,\upsilon,\,\phi,\,\varphi,\,\chi,\,\psi,\,\omega
                                                 770 \seqoflet{Frm}{mthfrm}
            \cmdmthfrm ... to do!
                                                           • \cmdmthfrm{cmdName};
                                                                 • \cmdmthfrm{cmdName}[NewName];
                                                                 \colon = NewName = NewNa
                                                    771 \DeclareRobustCommandx{\cmdmthfrm}[2][2=]
                                                                {\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
                                                    773 \DeclareRobustCommandx{\cmdmthargfrm}[2][2=]
                                                    774 {\usrmth{#1}{Frm}{argfrm}[#2]}
\cmdmthoargfrm ... to do!
                                                           • \cmdmthoargfrm{cmdName};
                                                                 \cmdNameFrm[sub][sub] [arg] = cmdName_{sub}^{sub}(arg)
                                                            • \cmdmthoargfrm{cmdName}[NewName];
                                                                 \colon = NewName_{sub}^{sub}(arg) = NewName_{sub}^{sub}(arg)
                                                    775 \DeclareRobustCommandx{\cmdmthoargfrm}[2][2=]
                                                    776 {\usrmth{#1}{Frm}{oargfrm}[#2]}
  \cmdmthparfrm ... to do!
```

```
\cmdmthparfrm{cmdName};
                       \verb|\cmdNameFrm[sub][sub][ext1]{par}[ext2] = cmdName_{sub}^{sub}ext1[par]ext2|
                      • \cmdmthparfrm{cmdName}[NewName];
                       777 \DeclareRobustCommandx{\cmdmthparfrm}[2][2=]
                   778 {\usrmth{#1}{Frm}{parfrm}[#2]}
\cmdmthoparfrm ... to do!
                     • \cmdmthoparfrm{cmdName};
                       \verb|\cmdNameFrm[sub][sub][par]| = cmdName_{sub}^{sub}[par]|
                      • \cmdmthoparfrm{cmdName}[NewName];
                        \colon dNameFrm[sub][sub][par] = NewName^{sub}_{sub}[par]
                   779 \DeclareRobustCommandx{\cmdmthoparfrm}[2][2=]
                       {\usrmth{#1}{Frm}{oparfrm}[#2]}
                   \mthmat, ... to do!
                     • \mthmat{Name}[sub][sup][Ext] = \mathbf{Name}_{sub}^{sup}Ext
                      • \mthargmat{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                     • \mthparmat{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                      • \mthparmat*{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1[Par^{Ex^{Ex}}]Ext2
                   782 %% Style for Matrices
                  783 \cmdmthall{mat}\newcommand{\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,\,\varepsilon,\,\zeta,\,\eta,\,\theta,\,\vartheta,\,\iota,\,\kappa,\,\varkappa,\,\lambda,\,\mu,\,\nu,\,\xi,\,\mathbf{o},\,\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
                  784 \seqoflet{Mat}{mthmat}
    \cmdmthmat ... to do!
                     • \cmdmthmat{cmdName};
                        \cmdNameMat[sub][sub][ext] = cmdName_{sub}^{sub}ext
                     • \cmdmthmat{cmdName}[NewName];
                       \verb|\cmdNameMat[sub][sub][ext]| = \verb| NewName| _{sub}^{sub} ext|
                   785 \DeclareRobustCommandx{\cmdmthmat}[2][2=]
                       {\usrmth{#1}{Mat}{mat}[#2]}
 \cmdmthargmat ... to do!
                     • \cmdmthargmat{cmdName};
                        \verb|\cmdNameMat[sub][sub][ext1]{arg}[ext2] = \mathbf{cmdName}_{sub}^{sub}ext1(arg)ext2
                      • \cmdmthargmat{cmdName}[NewName];
                       \cmdNameMat[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                   787 \DeclareRobustCommandx{\cmdmthargmat}[2][2=]
                   788 {\usrmth{#1}{Mat}{argmat}[#2]}
\cmdmthoargmat ... to do!
                     • \cmdmthoargmat{cmdName};
                       \cmdNameMat[sub][sub][arg] = cmdName_{sub}^{sub}(arg)
                      • \cmdmthoargmat{cmdName}[NewName];
                       \c New Name Mat[sub][sub][arg] = New Name <math>_{sub}^{sub}(arg)
                   789 \DeclareRobustCommandx{\cmdmthoargmat}[2][2=]
                   790 {\usrmth{#1}{Mat}{oargmat}[#2]}
```

```
\cmdmthparmat ... to do!
                                                                 • \cmdmthparmat{cmdName};
                                                                       \verb|\cmdNameMat[sub][sub][ext1]{par}[ext2] = \mathbf{cmdName}_{sub}^{sub}ext1[par]ext2
                                                                 • \cmdmthparmat{cmdName}[NewName];
                                                                       \cmdNameMat[sub][sub][ext1]\{par\}[ext2] = NewName_{sub}^{sub}ext1[par]ext2
                                                         791 \DeclareRobustCommandx{\cmdmthparmat}[2][2=]
                                                                      {\usrmth{#1}{Mat}{parmat}[#2]}
\cmdmthoparmat ... to do!
                                                                 • \cmdmthoparmat{cmdName};
                                                                       \verb|\cmdNameMat[sub][sub][par]| = \mathbf{cmdName}_{sub}^{sub}[par]|
                                                                 • \cmdmthoparmat{cmdName}[NewName];
                                                                       \verb|\cmdNameMat[sub][sub][par]| = \verb|NewName| sub| [par]|
                                                         793 \DeclareRobustCommandx{\cmdmthoparmat}[2][2=]
                                                                      {\usrmth{#1}{Mat}{oparmat}[#2]}
      \mthvec, ... to do!
                                                                 ullet \mthvec{Name}[sub][sup][Ext] = Name_{sub}^{sup}Ext
                                                                 • \mthargvec{Name}[sub][sup][Ext1]{Arg^{Ex^{Ex}}}[Ext2] = Name_{sub}^{sup}Ext1(Arg^{Ex^{Ex}})Ext2
                                                                 • \mthargvec*{Name}[sub][sup][Ext1]{Arg^{Ex^{2}}}[Ext2] = Name^{sup}_{sub}Ext1(Arg^{Ex^{Ex}})Ext2
                                                                 • \mthparvec{Name}[sub][sup][Ext1]{Par^{Ex^{Ex}}}[Ext2] = Name^{sup}_{sub}Ext1\left\lceil Par^{Ex^{Ex}} \right\rceil Ext2
                                                                 \bullet \  \, \texttt{\colored} \ 
                                                         795 %% Style for Vectors
                                                         796 \label{lem:command} $$ 1] {\boldsymbol{\mathbb{4}}} $$
             \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,\,\varepsilon,\,\zeta,\,\eta,\,\theta,\,\vartheta,\,\iota,\,\kappa,\,\varkappa,\,\lambda,\,\mu,\,\nu,\,\xi,\,o,\,\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
                                                         797 \seqoflet{Vec}{mthvec}
             \cmdmthvec ... to do!
                                                                 • \cmdmthvec{cmdName};
                                                                       \colon colon col
                                                                 • \cmdmthvec{cmdName}[NewName];
                                                                       \verb|\cmdNameVec[sub][sub][ext]| = NewName^{sub}_{sub}ext
                                                         798 \DeclareRobustCommandx{\cmdmthvec}[2][2=]
                                                         799 {\usrmth{#1}{Vec}{vec}[#2]}
   \cmdmthargvec ... to do!
                                                                 \cmdmthargvec{cmdName};
                                                                       \verb|\cmdNameVec[sub][sub][ext1]{arg}[ext2] = cmdName_{sub}^{sub}ext1(arg)ext2|
                                                                 • \cmdmthargvec{cmdName}[NewName];
                                                                       \cmdNameVec[sub][sub][ext1]{arg}[ext2] = NewName_{sub}^{sub}ext1(arg)ext2
                                                         800 \DeclareRobustCommandx{\cmdmthargvec}[2][2=]
                                                        801 {\usrmth{#1}{Vec}{argvec}[#2]}
\cmdmthoargvec ... to do!
                                                                 • \cmdmthoargvec{cmdName};
                                                                       \verb|\cmdNameVec[sub][sub][arg]| = cmdName^{sub}_{sub}(arg)
                                                                 • \cmdmthoargvec{cmdName}[NewName];
                                                                       \colon = NewName_{sub}^{sub}[arg] = NewName_{sub}^{sub}(arg)
                                                         802 \DeclareRobustCommandx{\cmdmthoargvec}[2][2=]
                                                         803 {\usrmth{#1}{Vec}{oargvec}[#2]}
```

```
\cmdmthparvec ... to do!
                 • \cmdmthparvec{cmdName};
                   \verb|\cmdNameVec[sub][sub][ext1]{par}[ext2] = cmdName_{sub}^{sub}ext1[par]ext2|
                 • \cmdmthparvec{cmdName}[NewName];
                   \cmdNameVec[sub][sub][ext1]\{par\}[ext2] = NewName_{sub}^{sub}ext1[par]ext2
               804 \DeclareRobustCommandx{\cmdmthparvec}[2][2=]
                   {\usrmth{#1}{Vec}{parvec}[#2]}
\cmdmthoparvec ... to do!
                 • \cmdmthoparvec{cmdName};
                  \verb|\cmdNameVec[sub][sub][par]| = cmdName^{sub}_{sub}[par]|
                 • \cmdmthoparvec{cmdName}[NewName];
                  \verb|\cmdNameVec[sub][sub][par]| = NewName_{sub}^{sub}[par]|
               806 \DeclareRobustCommandx{\cmdmthoparvec}[2][2=]
                   {\usrmth{#1}{Vec}{oparvec}[#2]}
               808 \fi
               813 \iftxt@
     \dotcheck
                 • A\dotcheck a\dotcheck.a = A.a. a
               814 \DeclareRobustCommand{\dotcheck}
                   {\@ifnextchar.{}{.\@}}
               \adhoc
                 • \adhoc = ad\ hoc
               817 \cmdtxtabr{adhoc}[ad hoc]
                 • \arrange a fortiori
    \afortiori
               818 \mbox{ } \mbox{cmdtxtabr{afortiori}[a fortiori]}
      \apriori
                 • \apriori = a priori
               819 \cmdtxtabr{apriori}[a priori]
                 • \arrowvertaposteriori = a posteriori
  \aposteriori
               820 \cmdtxtabr{aposteriori}[a posteriori]
                 • \backslash cf = cf.
          \cf
               821 \cmdtxtabr{cf}[cf.\@]
                 • \dedicto = de \ dicto
      \dedicto
               822 \cmdtxtabr{dedicto}[de dicto]
      \defacto
                 • \defacto = de\ facto
               823 \cmdtxtabr{defacto}[de facto]
                 • \forall dere = de \ re
        \dere
               824 \cmdtxtabr{dere}[de re]
                 • \foralldivideetimpera = divide et impera
\divideetimpera
               825 \cmdtxtabr{divideetimpera}[divide et impera]
                 • \backslash eg = e.g.
          \eg
               826 \cmdtxtabr{eg}[e.g.\@]
```

```
\ergo
                       ◆ \ergo = ergo
                    827 \cmdtxtabr{ergo}
                       • \errata = errata
         \errata
                    828 \cmdtxtabr{errata}
        \erratum
                       • \erratum = erratum
                    829 \cmdtxtabr{erratum}
           \etal
                      • \ensuremath{\backslash} \mathtt{etal} = et \ al.
                    830 \cmdtxtabr{etal}[et al.\@]
            \etc
                       • \backslashetc = etc.
                    831 \cmdtxtabr{etc}[etc.\@]
                       • \ie = i.e.
              \ie
                    832 \cmdtxtabr{ie}[i.e.\@]
                       \bullet \mutatismutandis = mutatis\ mutandis
\mutatismutandis
                    833 \cmdtxtabr{mutatismutandis}[mutatis mutandis]
      \percontra
                      • \percontra = per contra
                    834 \cmdtxtabr{percontra}[per contra]
     \primafacie
                       ullet \primafacie = prima\ facie
                    835 \cmdtxtabr{primafacie}[prima facie]
      \viceversa
                       • \viceversa = vice versa
                    836 \cmdtxtabr{viceversa}[vice versa]
                      • \vert vs = vs.
              \vs
                    837 \cmdtxtabr{vs}[vs.\@]
            \viz

    viz = viz.

                    838 \cmdtxtabr{viz}[viz.\@]
                    \Afortiori
                      • \Afortiori = A fortiori
                    840 \cmdtxtabr{Afortiori}[A fortiori]
        \Apriori
                       • \Apriori = A \ priori
                    841 \cmdtxtabr{Apriori}[A priori]
    \Aposteriori
                       • \Aposteriori = A posteriori
                    842 \cmdtxtabr{Aposteriori}[A posteriori]
        \Dedicto
                       • \Dedicto = De \ dicto
                    843 \cmdtxtabr{Dedicto}[De dicto]
        \Defacto
                       • \ensuremath{\texttt{Defacto}} = De\ensuremath{\textit{facto}}
                    844 \cmdtxtabr{Defacto} [De facto]
           \Dere
                       • \Dere = De re
                    845 \cmdtxtabr{Dere}[De re]
\Divideetimpera
                       • \Divideetimpera = Divide \ et \ impera
```

 $846 \cmdtxtabr{Divideetimpera}[Divide et impera]$ 

```
\Eg
                • \Eg = E.g.
              847 \cmdtxtabr{Eg}[E.g.\@]
                • \Errata = Errata
      \Errata
              848 \cmdtxtabr{Errata}
      \Erratum
                • \Erratum = Erratum
              849 \cmdtxtabr{Erratum}
                • \Mutatismutandis = Mutatis mutandis
\Mutatismutandis
              850 \cmdtxtabr{Mutatismutandis}[Mutatis mutandis]
    \Percontra
                • \ensuremath{\backslash} \mathtt{Percontra} = Per\ contra
              851 \cmdtxtabr{Percontra} [Per contra]
                \bullet \ \ \verb|\Primafacie| = Prima\ facie
   \Primafacie
              852 \cmdtxtabr{Primafacie}[Prima facie]
    \Viceversa
                • \forall Viceversa = Vice versa
              853 \cmdtxtabr{Viceversa}[Vice versa]
              • \alphala = \grave{a} la
         \ala
              857 \cmdtxtabr{ala}[\'a la]
        \n
                • \naif = naif
              858 \cmdtxtabr{naif}[na\"{i}f]
       \naive
                • \ne naive = naive
              859 \cmdtxtabr{naive}[na\"{i}ve]
        \role
                • \role = r\hat{o}le
              860 \cmdtxtabr{role}[r\^{o}le]
              \Role
                862 \mbox{cmdtxtabr{Role}[R\^{o}le]}
              \aka
                • \arrowvert aka = a.k.a.
              864 \cmdtxtabr{aka}[a.k.a.\@]
       \contd
                • \contd = contd.
              865 \cmdtxtabr{contd}[contd.\@]
         \iff
                • \iff = iff
              866 \cmdtxtabr{iff}
                • \iht = i.h.t.
         \iht
              867 \cmdtxtabr{iht}[i.h.t.\@]
```

```
\stx
          • \ \ \ \ stx = s.t.
         \resp
          • \resp = resp.
         869 \cmdtxtabr{resp}[resp.\@]
     \wrt
          870 \cmdtxtabr{wrt}[w.r.t.\@]
    \wlogx
          • \wdots w.l.o.g.
         871 \cmdtxtabr{wlogx}[w.l.o.g.\@]
         \Contd
          • \contd = Contd.
         873 \cmdtxtabr{Contd}[Contd.\@]
    \Wlogx
          • \W log x = W.l.o.g.
         874 \cmdtxtabr{Wlogx}[W.l.o.g.\@]
         875 \fi
         880 \ifmth@
         \defeq, \seteq ...
         882 \DeclareRobustCommand{\defeq}
         883 {\@ifstar%
         884
             {\bf \{\text{\textup{def}}\}{=}}}%
         885
             {\mthlbop{\triangleq}}}
         886 \DeclareRobustCommand{\seteq}
            {\@ifstar{\mthlbop{\Coloneqq}}}{\mthlbop{\coloneqq}}}
         \limp, ... ...
         889 \DeclareRobustCommand{\limp}
           {\mthlbop{\rightarrow}}
 \lcoimp, ... ...
         891 \DeclareRobustCommand{\lcoimp}
           {\mthlbop{\leftrightarrow}}
         \implies, ... ...
         894 \DeclareRobustCommand{\implies}
         895 {\mthlrel{\Rightarrow}}
         896 \DeclareRobustCommand{\notimplies}
         897 {\mthlrel{\not\Rightarrow}}
\implied, ... ...
         898 \DeclareRobustCommand{\implied}
           {\mthlrel{\Leftarrow}}
         901 {\mthlrel{\not\Leftarrow}}
```

```
\coimplies, ... ...
                902 \verb|\DeclareRobustCommand{\coimplies}|
                903 {\mthlrel{\Leftrightarrow}}
                904 \DeclareRobustCommand{\notcoimplies}
                905 {\mthlrel{\not\!\Leftrightarrow}}
                \cmodels, ... ...
                907 \DeclareRobustCommand{\cmodels}
                   {\mthlrel{\models}}
                909 \DeclareRobustCommand{\notcmodels}
                910 \quad {\bf \{not\models\}}
   \cequiv, ... ...
                911 \DeclareRobustCommand{\cequiv}
                912 {\mthlrel{\equiv}}
                913 \DeclareRobustCommand{\notcequiv}
                914 {\mthlrel{\not\equiv}}
                \denot ...
                916 \DeclareRobustCommand{\denot}
                917 {\@ifstar{\@sdenot}{\@denot}}
                918 \DeclareRobustCommand{\@denot}[1]
                919 {\mth{\argmid{\left\llbracket}{#1}{\right\rrbracket}}}
                920 \DeclareRobustCommand{\@sdenot}[1]
                   {\mth*{\argmid{\llbracket}{#1}{\rrbracket}}}
                \dual, \adj, ... ...
                923 \DeclareRobustCommand{\dual}[1]
                924 {\mth{\overline{#1}}}
                925 \DeclareRobustCommand{\adj}[1]
                926 {\mth{\mathring{#1}}}
                927 \DeclareRobustCommand{\der}[1]
                928 {\mth{\widehat{#1}}}
                929 \DeclareRobustCommand{\trn}[1]
                930 {\mth{\widetilde{#1}}}
          \vec ...
                931 \DeclareRobustCommand{\vec}
                932 {\@ifstar{\@svec}{\@vec}}
                933 \DeclareRobustCommand{\@vec}[1]
                934 {\mth{\mathaccent"017E{#1}}}
                935 \DeclareRobustCommand{\@svec}[1]
                936 {\mth{\overline{#1}}}
                \enumeration, ... ...
                938 \operatorname{denumeration}{\mathrm{hth}}{}{}{}{}
                939 \varcmd{enumerationx}{\mth*}{}{;}{}{}
  \sequence, ... ...
                940 \DeclareRobustCommand{\sequence}
                   {\@ifstar{\@ssequence}{\@sequence}}
                943 \operatorname{(0ssequence){\{\mth*\}\{[\}\{,\}\{]\}\{\}\}\}}
                944 \DeclareRobustCommand{\sequencel}
                945 {\c {\c c} {\c c} {\c c} {\c c}}
```

```
946 \varcmd{@sequencel}{\mth}{\left[}{,}{\right.}{}
            947 \varcmd{@ssequencel}{\mth*}{[]{,}{}}
            948 \DeclareRobustCommand{\sequencer}
            949 {\@ifstar{\@ssequencer}{\@sequencer}}
            951 \varcmd{@ssequencer}{\mth*}{}{,}{]}{}
            952 \DeclareRobustCommand{\sequencex}
            953 {\@ifstar{\@ssequencex}{\@sequencex}}
            954 \operatorname{(0sequencex}{\left[}{{;}}{\left[}{{;}}{{i}}}{{i}}}
            955 \varcmd{@ssequencex}{\mth*}{[]{;}{]}{}
            956 \DeclareRobustCommand{\sequencex1}
                {\@ifstar{\@ssequencexl}{\@sequencexl}}
            958 \varcmd{@sequencexl}{\mth}{\left[}{;}{\right.}{}
            959 \varcmd{@ssequencex1}{\mth*}{[]{;}{}}
            960 \verb|\DeclareRobustCommand{\sequencexr}|
                {\@ifstar{\@ssequencexr}{\@sequencexr}}
            962 \varcmd{@sequencexr}{\mth}{\left.}{;}{\right]}{}
            963 \varcmd{@ssequencexr}{\mth*}{}{;}{]}{}
\tuple, ...
            964 \DeclareRobustCommand{\tuple}
            965 {\@ifstar{\@stuple}{\@tuple}}
            966 \varcmd{@tuple}{\mth}{\left\langle}{,}{\right\rangle}{}
            967 \varcmd{@stuple}{\mth*}{\langle}{,}{\rangle}{}
            968 \DeclareRobustCommand{\tuplel}
                {\@ifstar{\@stuplel}{\@tuplel}}
            970 \varcmd{@tuplel}{\mth}{\left\langle}{,}{\right.}{}
            971 \varcmd{@stuplel}{\mth*}{\langle}{,}{}}
            972 \DeclareRobustCommand{\tupler}
            973 {\@ifstar{\@stupler}{\@tupler}}
            975 \varcmd{@stupler}{\mth*}{}{,}{\rangle}{}
            976 \DeclareRobustCommand{\tuplex}
            977 {\@ifstar{\@stuplex}{\@tuplex}}
            978 \varcmd{@tuplex}{\mth}{\left\langle}{;}{\right\rangle}{}
            979 \varcmd{@stuplex}{\mth*}{\langle}{;}{\rangle}{}
            980 \DeclareRobustCommand{\tuplex1}
                {\@ifstar{\@stuplexl}{\@tuplexl}}
            982 \varcmd{@tuplex1}{\mth}{\left\langle}{;}{\right.}{}
            983 \ \ensuremath{\mth*}{\ngle}{;}{}{}
            984 \DeclareRobustCommand{\tuplexr}
            985 {\@ifstar{\@stuplexr}{\@tuplexr}}
            986 \varcmd{@tuplexr}{\mth}{\left.}{;}{\right\rangle}{}
            987 \varcmd{@stuplexr}{\mth*}{}{;}{\rangle}{}
            \set, ... ...
            989 \DeclareRobustCommand{\set}
            990 {\@ifstar{\@sset{\vert}}}{\@set{\vert}}}
            991 \DeclareRobustCommand{\setx}
            992 {\@ifstar{\@sset{:}}{\@set{.\!:}}}
            993 \DeclareRobustCommand{\@set}[3]
            994 {\bf \{\hat \{}\
            995 \DeclareRobustCommand{\@sset}[3]
            996 {\mth*{\argmid{\lbrace}{\argsep{#2}{\,#1\,}{#3}}{\rbrace}}}
            997 \DeclareRobustCommand{\set1}
                {\@ifstar{\@ssetl{\vert}}{\@setl{\vert}}}
            999 \DeclareRobustCommand{\setlx}
                {\@ifstar{\@ssetl{:}}{\@setl{.\!\!\!:}}}
            1001 \DeclareRobustCommand{\@set1}[2]
                {\mth{\argmid{\left\lbrace}{#2}{\,\right#1\!}}}
            1003 \DeclareRobustCommand{\@sset1}[2]
                {\mth*{\argmid{\lbrace}{#2}{\,#1\!}}}
```

```
1005 \DeclareRobustCommand{\setr}
                 {\@ifstar{\@ssetr}{\@setr}}
             1007 \DeclareRobustCommand{\setrx}
             1008 \quad \{\texttt{\Qssetr}\{\texttt{\Qssetr}\}\}
             1009 \DeclareRobustCommand{\@setr}[1]
             1010 {\mth{\argmid{\left.}{#1}{\right\rbrace}}}
             1011 \DeclareRobustCommand{\@ssetr}[1]
                 {\mth*{\argmid{}{#1}{\rbrace}}}
        \card ...
             1013 \DeclareRobustCommand{\card}
                 {\@ifstar{\@scard}{\@card}}
             1015 \DeclareRobustCommand{\@card}[1]
             1016 {\mth{\argmid{\left\lvert}{#1}{\right\rvert}}}
             1017 \DeclareRobustCommand{\@scard}[1]
                 {\mth*{\argmid{\lvert}{#1}{\rvert}}}
        \pow ...
             1019 \DeclareRobustCommand{\pow}[1]
                 {\mth{2^{\defval{#1}{\cdot}}}}
             \emptyrel ...
             1022 \DeclareRobustCommand{\emptyrel}
                 {\mth{\varnothing}}
             \dom, \cod, ... ...
             1025 \ \mbox{usrmth{dom}{fdom}{{argfun}}}
             1026 \usrmth{cod}{}{argfun}
             1027 \usrmth{rng}{}{argfun}
             1028 \usrmth{img}{}{argfun}
             \prj
             1030 \DeclareRobustCommand{\prj}
             1031
                {\mthlbop{\downarrow}}
        \rst ...
             1032 \DeclareRobustCommand{\rst}
             1033
                 {\mthlbop{\upharpoonright}}
        \cmp ...
             1034 \DeclareRobustCommand{\cmp}
                 {\mthlbop{\circ}}
             \emptyfun
             1037 \DeclareRobustCommand{\emptyfun}
                 {\mth{\varnothing}}
             \pto, \pmapsto
             1040 \DeclareMathOperator{\pto}
                 {\ensuremath{\rightharpoonup}}
             1042 \DeclareMathOperator{\pmapsto}
                 {\ensuremath{\mathrel{\raisebox{0.5ex}{\footnotesize${\llcorner}$}%
             1044
                   \kern-1.5ex\rightharpoonup}}}
```

```
\fix, \ifp, ... ...
                                       1046 \mbox{ }\mbox{usrmth{fix}{fin}}
                                       1047 \mbox{ \normth{ifp}{fun}}
                                       1048 \mbox{ \norm}{1048} \mbox{\norm}{1048} \mbox
                                       1049 \mbox{ } \mbox{usrmth} \mbox{gfp}{} \mbox{fun}
                                       \Aomega, \AOmega
                                       1051 \usrmth{Aomega}{}{argset}[\omega]
                                       1052 \usrmth{AOmega}{}{argset}[\Omega]
\Atheta, \ATheta
                                       1053 \usrmth{Atheta}{}{argset}[\theta]
                                       1054 \usrmth{ATheta}{}{argset}[\Theta]
    \Aomicron, ... ...
                                       1055 \usrmth{Aomicron}{}{argset}[\omicron]
                                       1056 \usrmth{AOmicron}{}{argset}[\Omicron]
                                       \SetB ...
                                       1058 \DeclareRobustCommand{\SetB}
                                                  {\mthset[mathbb]{B}}
                        \SetF ...
                                       1060 \DeclareRobustCommand{\SetF}
                                       1061 {\mthset[mathbb]{F}}
             \SetN, ... ...
                                       1062 \DeclareRobustCommand{\SetN}
                                                  {\mthset[mathbb]{N}}
                                       1064 \DeclareRobustCommand{\SetNI}[1][]
                                       1065
                                                  {\SetN[\infty #1]}
             \SetZ, ... ...
                                       1066 \DeclareRobustCommand{\SetZ}
                                                  {\mthset[mathbb]{Z}}
                                       1068 \DeclareRobustCommand{\SetZI}[1][]
                                                   {\SetZ[\pm\infty #1]}
                                       1070 \DeclareRobustCommand{\SetZPI}[1][]
                                                    {\SetZ[+\infty #1]}
                                       1072 \DeclareRobustCommand{\SetZNI}[1][]
                                                  {\SetZ[-\infty #1]}
             \SetQ, ... ...
                                       1074 \DeclareRobustCommand{\SetQ}
                                                   {\mthset[mathbb]{Q}}
                                       1075
                                       1076 \DeclareRobustCommand{\SetQI}[1][]
                                                    {\SetQ[\pm\infty #1]}
                                       1078 \DeclareRobustCommand{\SetQPI}[1][]
                                                    {\SetQ[+\infty #1]}
                                       1080 \DeclareRobustCommand{\SetQNI}[1][]
                                                  {\left[-\left( +1\right) \right]}
             \SetR, ... ...
                                       1082 \DeclareRobustCommand{\SetR}
                                                    {\mthset[mathbb]{R}}
                                       1084 \DeclareRobustCommand{\SetRI}[1][]
                                                 {\SetR[\pm\infty #1]}
```

```
1086 \DeclareRobustCommand{\SetRPI}[1][]
                {\SetR[+\infty #1]}
            1088 \DeclareRobustCommand{\SetRNI}[1][]
            1089 {\SetR[-\infty #1]}
  \SetC, ... ...
            1090 \DeclareRobustCommand{\SetC}
                {\mthset[mathbb]{C}}
            1092 \DeclareRobustCommand{\SetCI}[1][]
            1093 {\SetC[\infty #1]}
            \num, ... ...
            1095 \DeclareRobustCommand{\num}[1]
            1096 {\mth{[#1]}}
            1097 \DeclareRobustCommand{\numcc}[2]
            1098 {\mth{[\argsep{#1}{,}{#2}]}}
            1099 \DeclareRobustCommand{\numco}[2]
            1100 {\mth{[\argsep{#1}{,}{#2})}}
            1101 \DeclareRobustCommand{\numoc}[2]
            1102 {\mth{(\argsep{#1}{,}{#2}]}}
            1103 \DeclareRobustCommand{\numoo}[2]
            1104 \quad \{\mth{(\argsep{\#1}{,}{\#2})}\}
            \abs, \norm ...
            1106 \DeclareRobustCommand{\abs}
            1107 {\@ifstar{\@sabs}{\@abs}}
            1108 \DeclareRobustCommand{\@abs}[1]
                {\mth{\argmid{\left\lvert}{#1}{\right\rvert}}}
            1110 \DeclareRobustCommand{\@sabs}[1]
            1112 \DeclareRobustCommand{\norm}
            1113 {\@ifstar{\@snorm}{\@norm}}
            1114 \DeclareRobustCommand{\@norm}[1]
            1115 {\mth{\argmid{\left\lVert}{#1}{\right\rVert}}}
            1116 \DeclareRobustCommand{\@snorm}[1]
            \floor, \ceil ...
            1118 \DeclareRobustCommand{\floor}
            1119 {\@ifstar{\@sfloor}{\@floor}}
            1120 \DeclareRobustCommand{\@floor}[1]
                {\mth{\argmid{\left\lfloor}{#1}{\right\rfloor}}}
            1122 \DeclareRobustCommand{\@sfloor}[1]
            1123 {\mth*{\argmid{\lfloor}{#1}{\rfloor}}}
            1124 \DeclareRobustCommand{\ceil}
            1125 {\@ifstar{\@sceil}{\@ceil}}
            1126 \DeclareRobustCommand{\@ceil}[1]
                {\mth{\argmid{\left\lceil}{#1}{\right\rceil}}}
            1128 \DeclareRobustCommand{\@sceil}[1]
                {\mth*{\argmid{\lceil}{#1}{\rceil}}}
            \arg ...
            1131 \usrmth{arg}{}{fun}
  \evn, \odd ...
            1132 \usrmth{evn}{}{fun}
            1133 \setminus \{d\}
```

```
\bst, ... ...
                                1134 \usrmth{bst}{}{fun}
                                1135 \usrmth{argbst}{}{fun}[arg\,bst]
\min, \max, ... ...
                               1136 \usrmth{min}{}{fun}
                                1137 \operatorname{max}{fun}
                                1138 \usrmth{argmin}{}{fun}[arg\,min]
                                1139 \usrmth{argmax}{}{fun}[arg\,max]
         \inf, \sup ...
                                1140 \usrmth{inf}{}{fun}
                                1141 \usrmth{sup}{}{fun}
                                \emptyseq ...
                                1143 \DeclareRobustCommand{\emptyseq}
                                1144 {\mth{\varepsilon}}
                     \len ...
                                1145 \DeclareRobustCommand{\len}
                                1146 {\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\crine{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\cline{\
                                1147 \DeclareRobustCommandx{\@len}[3][1=, 2=]
                                1148 {\mth{\argmid{#1\lvert}{#3}{#2\rvert}}}
                                1149 \DeclareRobustCommand{\@len}[1]
                                1150 {\mth{\argmid{\left\lvert}{#1}{\right\rvert}}}
                                1151 \DeclareRobustCommand{\@slen}[1]
                                \fst, \lst ...
                                1153 \usrmth{fst}{}{argfun}
                                1154 \usrmth{lst}{}{argfun}
                                1155 \fi
                                1160 \ifcom@
         \defcomcls ... to do!
                                       • \defcomcls{CompClass};
                                          \compClass[sub][sup][arg] = CompCLASS_{SUB}^{SUP}(ARG)
                                       • \defcomcls{CompClass}[NewClass];
                                          \compClass[sub][sup][arg] = NewClass_{SUB}^{SUP}(ARG)
                                1161 \newcommandx{\defcomcls}[2][2=]
                                1162 {\csdef{#1}{\txtoargcom{\defval{#2}{#1}}}}
   \defcomclsgrp ... to do!
                                       • \defcomclsgrp{CompClass};
                                           \CompClass[sub][sup][arg] = COMPCLASS_{SUB}^{SUP}(ARG)
                                          \verb|\CoCompClass[sub][sup][arg]| = CoCompClass_{SUB}^{SUP}(ARG)
                                          \verb|\CompClassE[sub][sup][arg]| = CompClass-Easy_{SUB}^{SUP}(ARG)
                                          \CoCompClassE[sub][sup][arg] = CoCoMPCLASS-EASY_{SUB}^{SUP}(ARG)
                                          \verb|\CompClassH[sub][sup][arg]| = CompClass-Hard_{SUB}^{SUP}(ARG)
                                          \CoCompClassH[sub][sup][arg] = CoCompClass-Hard_{SUB}^{SUP}(ARG)
```

```
\CompClassC[sub][sup][arg] = COMPCLASS-COMPLETE_{SUB}^{SUP}(ARG)
  \verb|\CoCompClassC[sub][sup][arg]| = CoCompClass-complete_{SUB}^{SUP}(ARG)
 \DCompClass[sub][sup][arg] = DComPCLASS_{SUB}^{SUP}(ARG)
  \CoDCompClass[sub][sup][arg] = CoDCoMPCLASS_{SUB}^{SUP}(ARG)
 \verb|\DCompClassE[sub][sup][arg]| = DCompClass-Easy_{SUB}^{SUP}(ARG)
  \verb|\CoDCompClassE[sub][sup][arg]| = CoDCompClass-Easy_{SUB}^{SUP}(ARG)
  \label{eq:decompClassHsub} $$\D{\compClassHard}_{SUB}^{SUP}(ARG) = DCOMPCLASS-HARD_{SUB}^{SUP}(ARG)$
  \CoDCompClassH[sub][sup][arg] = CoDCoMPCLASS-HARD_{SUB}^{SUP}(ARG)
  \verb|\DCompClassC[sub][sup][arg]| = DCompClass-complete_{sub}^{SUP}(ARG)
  \CoDCompClassC[sub][sup][arg] = CoDCompClass-CompLete_{Sub}^{SUP}(ARG)
 \N{\c CompClass[sub][sup][arg]} = N{\c CompCLass}_{SUB}^{SUP}(ARG)
  \verb|\CoNCompClass[sub][sup][arg]| = CoNCompClass_{SUB}^{SUP}(ARG)
 \label{eq:ncompclassEsub} $$ \[\sup] [arg] = NCOMPCLASS-EASY_{SUB}^{SUP}(ARG) $$
  \ConCompClassE[sub][sup][arg] = ConCompClass-Easy_{SUB}^{SUP}(ARG)
 \NCompClassH[sub][sup][arg] = NCompClass-Hard_{SUB}^{SUP}(ARG)
  \ConCompClassH[sub][sup][arg] = ConCompClass-Hard_{SUB}^{SUP}(Arg)
  \NCompClassC[sub][sup][arg] = NCOMPCLASS-COMPLETE_{SUB}^{SUP}(ARG)
 \verb|\ConCompClassC[sub][sup][arg]| = ConCompClass-Complete_{Sub}^{SUP}(ARG)
 \verb|\UCompClass[sub][sup][arg]| = UCompClass_{SUB}^{SUP}(ARG)
  \CoulompClass[sub][sup][arg] = CoUCOMPCLASS_{SUB}^{SUP}(ARG)
  \UCompClassE[sub][sup][arg] = UCompClass-Easy_{SUB}^{SUP}(ARG)
  \verb|\CoUCompClassE[sub][sup][arg]| = CoUCompClass-Easy_{SUB}^{SUP}(ARG)
  \label{eq:UCompClassHard} $$\UCompClassH[sub][sup][arg] = UCompClass-Hard_{SUB}^{SUP}(ARG)$
  \CoulompClassH[sub][sup][arg] = CoUCOMPCLASS-HARD_{SUB}^{SUP}(ARG)
  \UCompClassC[sub][sup][arg] = UCompClass-CompLete_{SUB}^{SUP}(ARG)
  \verb|\CoUCompClassC[sub][sup][arg]| = CoUCOMPCLASS-COMPLETE_{SUB}^{SUP}(ARG)
 \triangle CompClass[sub][sup][arg] = ACOMPCLASS_{SUB}^{SUP}(ARG)
 \verb|\CoACompClass[sub][sup][arg]| = CoACompClass_{SUB}^{SUP}(ARG)
  \label{eq:acompClassEsub} $$ [\sup] [\arg] = ACOMPCLASS-EASY_{SUB}^{SUP}(ARG) $$
  \CoACompClassE[sub][sup][arg] = CoACompClass-Easy_{SUB}^{SUP}(ARG)
  \label{eq:acompClassHard} $$ \Delta CompClassH[sub][sup][arg] = ACompClass-Hard_{SUB}^{SUP}(ARG) $$
  \verb|\CoACompClassH[sub][sup][arg]| = CoACompClass-Hard_{SUB}^{SUP}(ARG)
  \triangle CompClassC[sub][sup][arg] = ACOMPCLASS-COMPLETE_{SUB}^{SUP}(ARG)
  \CoACompClassC[sub][sup][arg] = CoACompClass-CompLete_{SUB}^{SUP}(ARG)
\defcomclsgrp{CompClass}[NewClass];
  \verb|\CompClass[sub][sup][arg]| = NewClass_{SUB}^{SUP}(ARG)
  \CoCompClass[sub][sup][arg] = CoNewClass_{SUB}^{SUP}(ARG)
  \verb|\CompClassE[sub][sup][arg]| = NewClass-easy_{sub}^{SUP}(ARG)
  \verb|\CoCompClassE[sub][sup][arg]| = CoNewClass-easy_{Sub}^{SUP}(ARG)
  \verb|\CompClassH[sub][sup][arg]| = NewClass-Hard_{SUB}^{SUP}(ARG)
  \CoCompClassH[sub][sup][arg] = CoNEWCLASS-HARD_{SUB}^{SUP}(ARG)
  \CompClassC[sub][sup][arg] = NewClass-completesub(ARG)
  \verb|\CoCompClassC[sub][sup][arg]| = \operatorname{CoNewClass-complete}_{SUB}(ARG)
 \DCompClass[sub][sup][arg] = DNEWCLASS_{SUB}^{SUP}(ARG)
 \verb|\CoDCompClass[sub][sup][arg]| = CoDNewClass_{SUB}^{SUP}(ARG)
 \label{eq:decompClassE[sub][sup][arg]} DNEWCLASS-EASY_{SUB}^{SUP}(ARG)
  \verb|\CoDCompClassE[sub][sup][arg]| = CoDNewClass-easy_{Sub}^{SUP}(ARG)
  \DCompClassH[sub][sup][arg] = DNEWCLASS-HARD_{SUB}^{SUP}(ARG)
  \CoDCompClassH[sub][sup][arg] = CoDNewClass-Hard_{SUB}^{SUP}(ARG)
  \verb|\DCompClassC[sub][sup][arg]| = DNEWCLASS-COMPLETE_{SUB}^{SUP}(ARG)
 \CodCompClassC[sub][sup][arg] = CodNewClass-CompLete_{SUB}^{SUP}(ARG)
 \verb|\NCompClass[sub][sup][arg]| = NNEWCLASS_{SUB}^{SUP}(ARG)
  \ConCompClass[sub][sup][arg] = ConNewClass_{SUB}^{SUP}(ARG)
  \verb|\NCompClassE[sub][sup][arg]| = NNEWCLASS-EASY_{SUB}^{SUP}(ARG)
  \verb|\CoNCompClassE[sub][sup][arg]| = CoNNewClass-Easy_{SUB}^{SUP}(ARG)
  \verb|\NCompClassH[sub][sup][arg]| = NNEWCLASS-HARD_{SUB}^{SUP}(ARG)
  \ConCompClassH[sub][sup][arg] = ConNewClass-Hard_{SUB}^{SUP}(Arg)
```

```
\ConCompClassC[sub][sup][arg] = ConNewClass-Complete_{Sub}^{SUP}(Arg)
                        \UCompClass[sub][sup][arg] = UNEWCLASS_{SUB}^{SUP}(ARG)
                        \verb|\CoUCompClass[sub][sup][arg]| = CoUNEWCLASS_{SUB}^{SUP}(ARG)
                        \UCompClassE[sub][sup][arg] = UNEWCLASS-EASY_{SUB}^{SUP}(ARG)
                        \verb|\CoUCompClassE[sub][sup][arg]| = CoUNewClass-easy_{Sub}^{SUP}(ARG)
                        \UCompClassH[sub][sup][arg] = UNEWCLASS-HARD_{SUB}^{SUP}(ARG)
                        \verb|\CoUCompClassH[sub][sup][arg]| = CoUNEWCLASS-HARD_{SUB}^{SUP}(ARG)
                        \verb|\UCompClassC[sub][sup][arg]| = UNEWCLASS-COMPLETE_{SUB}^{SUP}(ARG)
                        \CoUCompClassC[sub][sup][arg] = CoUNEWCLASS-COMPLETE_{SUB}^{SUP}(ARG)
                        \texttt{\ACompClass[sub][sup][arg]} = ANEWCLASS_{SUB}^{SUP}(ARG)
                        \verb|\CoACompClass[sub][sup][arg]| = CoANewClass_{SUB}^{SUP}(ARG)
                        \verb|\ACompClassE[sub][sup][arg]| = ANEWCLASS-EASY_{SUB}^{SUP}(ARG)
                        \CoACompClassE[sub][sup][arg] = CoANEWCLASS-EASY_{SUB}^{SUP}(ARG)
                        \Lambda CompClassH[sub][sup][arg] = ANEWCLASS-HARD_{SUB}^{SUP}(ARG)
                        \CoACompClassH[sub][sup][arg] = CoANewClass-Hard_{SUB}^{SUP}(Arg)
                        \triangle CompClassC[sub][sup][arg] = ANEWCLASS-COMPLETE_{SUB}^{SUP}(ARG)
                        \CoACompClassC[sub][sup][arg] = CoANewClass-Complete_{Sub}^{SUP}(ARG)
                   1163 \newcommandx{\defcomclsgrp}[2][2=]
                         {\defcomclsgrpsem{\#1}{\defval{\#2}{\#1}}}\%
                   1164
                   1165
                         \defcomclsgrpsem{#1}{\defval{#2}{#1}}[Co]}
                   1166 \newcommandx{\defcomclsgrpsem}[3][3=]
                         {\defcomclsgrpred{#3#1}{#2}[#3]%
                   1167
                   1168
                         \defcomclsgrpred{#3D#1}{#2}[#3D]%
                   1169
                         \defcomclsgrpred{#3N#1}{#2}[#3N]%
                   1170
                         \defcomclsgrpred{#3U#1}{#2}[#3U]%
                   1171
                         \defcomclsgrpred{#3A#1}{#2}[#3A]}
                   1172 \newcommandx{\defcomclsgrpred}[3][3=]
                        {\defcomclsgrpcmd{#1}{#2}[#3]%
                   1173
                   1174
                         1175
                         \defcomclsgrpcmd{#1H}{#2}[#3][-hard]%
                         \defcomclsgrpcmd{#1C}{#2}[#3][-complete]}%
                   1177 \newcommandx{\defcomclsgrpcmd}[4][3=, 4=]
                         {\csdef{#1}{\txtoargcom{#3#2#4}}}
       \defcomhrc ... to do!
                      • \defcomhrc{CompHierarchy};
                        {\tt CompHierarchy[sub][sup][par] = CompHierarchy_{SUB}^{SUP}[PAR]}
                      • \defcomhrc{CompHierarchy} [NewHierarchy];
                        CompHierarchy[sub][sup][par] = NEWHIERARCHY<sup>SUP</sup><sub>SUB</sub>[PAR]
                   1179 \newcommandx{\defcomhrc}[2][2=]
                         {\csdef{#1}{\txtoparcom{\defval{#2}{#1}}}}
                   \Easy, \Hard, ...
                   1182 \cmdtxtcom{Easy}
                   1183 \cmdtxtcom{Hard}
                   1184 \cmdtxtcom{Complete}
                   \FPT, ...
                      • \FPT[sub] [sup] [arg] = FPT_{SUB}^{SUP}(ARG)
                      \bullet \FPLin[sub] [sup] [arg] = FPL_{SUB}^{SUP}(ARG)
```

 $\label{eq:ncompClassC} $$\NEWCLASS-COMPLETE_{SUB}^{SUP}(ARG)$$$ 

```
• \FPCub[sub][sup] [arg] = FPC_{SUB}^{SUP}(ARG)
                  1186 \defcomcls{FPT}
                  1187 \defcomcls{FPLin}[FPL]
                  1188 \defcomcls{FPQdr}[FPQ]
                  1189 \defcomcls{FPCub}[FPC]
                  \Time, ...
                        \texttt{\TimeE[sub][sup][arg]} = \text{TIME-EASY}^{\text{SUP}}_{\text{SUB}}(\text{ARG})
                        \verb|\TimeH[sub][sup][arg]| = TIME-HARD_{SUB}^{SUP}(ARG)
                        TimeC[sub][sup][arg] = TIME-COMPLETE_{SUB}^{SUP}(ARG)
                      • \DTime[sub][sup][arg] = DTIME_{SUB}^{SUP}(ARG)
                        \texttt{\DTimeE[sub][sup][arg]} = \mathrm{DTIME\text{-}EASY}^{SUP}_{SUB}(ARG)
                        \verb|\DTimeH[sub][sup][arg]| = DTIME-HARD_{SUB}^{SUP}(ARG)
                        \DTimeC[sub][sup][arg] = DTIME-COMPLETE_{SUB}^{SUP}(ARG)
                      • \NTime[sub][sup][arg] = NTIME_{SUB}^{SUP}(ARG)
                        \TimeE[sub][sup][arg] = NTIME-EASY_{SUB}^{SUP}(ARG)
                        \verb|\NTimeH[sub][sup][arg]| = NTIME-HARD_{SUB}^{SUP}(ARG)
                        \NTimeC[sub][sup][arg] = NTIME-COMPLETE_{SUB}^{SUP}(ARG)
                      • \UTime[sub][sup][arg] = UTIME_{SUB}^{SUP}(ARG)
                        \label{eq:utimeE} $$ \operatorname{UTIME-EASY}^{SUP}_{SUB}(ARG) $$
                        \verb|\UTimeH[sub][sup][arg]| = \mathrm{UTIME\text{-}HARD}^{\mathrm{SUP}}_{\mathrm{SUB}}(\mathrm{ARG})
                        \UTimeC[sub][sup][arg] = UTIME-COMPLETE_{SUB}^{SUP}(ARG)
                      • ATime[sub][sup][arg] = ATIME_{SUB}^{SUP}(ARG)
                        \Delta TimeE[sub][sup][arg] = ATIME-EASY_{SUB}^{SUP}(ARG)
                        \Delta TimeH[sub][sup][arg] = ATIME-HARD_{SUB}^{SUP}(ARG)
                        \Delta TimeC[sub][sup][arg] = ATIME-COMPLETE_{SUB}^{SUP}(ARG)
                  1191 \defcomclsgrp{Time}
  \Space, ...
                      • Space[sub][sup][arg] = SPACE_{SUB}^{SUP}(ARG)
                        \verb|\SpaceE[sub][sup][arg]| = SPACE-EASY_{SUB}^{SUP}(ARG)
                        \SpaceH[sub][sup][arg] = SPACE-HARD_{SUB}^{SUP}(ARG)
                        \SpaceC[sub][sup][arg] = SPACE-COMPLETE_{SUB}^{SUP}(ARG)
                      • DSpace[sub][sup][arg] = DSPACE_{SUB}^{SUP}(ARG)
                        \DSpaceE[sub][sup][arg] = DSPACE-EASY_{SUB}^{SUP}(ARG)
                        \DSpaceH[sub][sup][arg] = DSPACE-HARD_{SUB}^{SUP}(ARG)
                        \DSpaceC[sub][sup][arg] = DSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                      • NSpace[sub][sup][arg] = NSPACE_{SUB}^{SUP}(ARG)
                        \NSpaceE[sub][sup][arg] = NSPACE-EASY_{SUB}^{SUP}(ARG)
                        \NSpaceH[sub][sup][arg] = NSPACE-HARD_{SUB}^{SUP}(ARG)
                        \NSpaceC[sub][sup][arg] = NSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                      \verb|\USpaceE[sub][sup][arg]| = USPACE-EASY_{SUB}^{SUP}(ARG)
                        \USpaceH[sub][sup][arg] = USPACE-HARD_{SUB}^{SUP}(ARG)
                        \USpaceC[sub][sup][arg] = USPACE-COMPLETE_{SUB}^{SUP}(ARG)
                      • ASpace[sub][sup][arg] = ASPACE_{SUB}^{SUP}(ARG)
                        \texttt{ASpaceE[sub][sup][arg]} = \mathrm{ASPACE\text{-}EASY}^{SUP}_{SUB}(\mathrm{ARG})
                        \verb|ASpaceH[sub][sup][arg]| = ASPACE-HARD_{SUB}^{SUP}(ARG)
                        ASpaceC[sub][sup][arg] = ASPACE-COMPLETE_{SUB}^{SUP}(ARG)
                  1192 \defcomclsgrp{Space}
                      • \lfloor LogTime[sub][sup][arg] = LogTime_{SUB}^{SUP}(ARG)
\LogTime, ...
                        \verb|\LogTimeE[sub][sup][arg]| = LogTime-Easy_{SUB}^{SUP}(ARG)
                        \LogTimeH[sub][sup][arg] = LogTime-HARD_{SUB}^{SUP}(ARG)
                        \lceil LogTimeC[sub][sup][arg] = LogTime-Complete_{SUB}^{SUP}(ARG)
                      • \DLogTime[sub][sup][arg] = DLogTIME_{SUB}^{SUP}(ARG)
                        \texttt{\baseline{thmatcharger} LogTimeE[sub][sup][arg]} = DLogTime-EASY_{SUB}^{SUP}(ARG)
                        \label{eq:decomposition} $$\DLogTimeH[sub][sup][arg] = DLogTime-HARD_{SUB}^{SUP}(ARG)$
                        \DLogTimeC[sub][sup][arg] = DLogTime-COMPLETE_{SUB}^{SUP}(ARG)
```

```
\verb|\NLogTimeE[sub][sup][arg]| = NLogTime-EASY_{SUB}^{SUP}(ARG)
                          \verb|\NLogTimeH[sub][sup][arg]| = NLogTime-Hard_{SUB}^{SUP}(ARG)
                          \NLogTimeC[sub][sup][arg] = NLogTime-Complete_{SUB}^{SUP}(ARG)
                        • \ULogTime[sub][sup][arg] = ULogTime_{SUB}^{SUP}(ARG)
                          \label{eq:ULogTimeEsub} $$ \ULogTimeE[sub] [sup] [arg] = ULogTime-EASY_{SUB}^{SUP}(ARG) $$
                          \verb|VLogTimeH[sub][sup][arg]| = ULogTime-Hard_{SUB}^{SUP}(ARG)
                          \ULogTimeC[sub][sup][arg] = ULogTime-COMPLETE_{SUB}^{SUP}(ARG)
                        • ALogTime[sub][sup][arg] = ALogTime_{SUB}^{SUP}(ARG)
                          \verb|\ALogTimeE[sub][sup][arg]| = ALogTime-EASY_{SUB}^{SUP}(ARG)
                          \ALogTimeH[sub][sup][arg] = ALogTime-Hard_{SUB}^{SUP}(ARG)
                          \Delta LogTimeC[sub][sup][arg] = ALogTime-Complete_{SUB}^{SUP}(ARG)
                   1193 \defcomclsgrp{LogTime}
                        • \lfloor LogSpace[sub][sup][arg] = LogSpace_{SUB}^{SUP}(ARG)
\LogSpace, ...
                          \verb|\LogSpaceE[sub][sup][arg]| = \operatorname{LOGSPACE-EASY}^{SUP}_{SUB}(ARG)
                          \verb|\LogSpaceH[sub][sup][arg]| = \operatorname{LogSpace-Hard}_{SUB}^{SUP}(ARG)
                          LogSpaceC[sub][sup][arg] = LogSpace-Complete_{SUB}^{SUP}(ARG)
                        • \DLogSpace[sub][sup][arg] = DLogSpace_{SUB}^{SUP}(ARG)
                          \label{eq:decomposition} $$\DLogSpaceE[sub][sup][arg] = DLogSpace-Easy_{SUB}^{SUP}(ARG)$
                          \label{eq:decomposition} $$\DLogSpaceH[sub][sup][arg] = DLogSpace-HARD_{SUB}^{SUP}(ARG)$
                          \DLogSpaceC[sub][sup][arg] = DLogSpace-Complete_{SUB}^{SUP}(ARG)
                        • \NLogSpace[sub][sup][arg] = NLogSpace_{SUB}^{SUP}(ARG)
                          \NLogSpaceE[sub][sup][arg] = NLogSpace-Easy_{SUB}^{SUP}(ARG)
                          \verb|\NLogSpaceH[sub][sup][arg]| = NLogSpace-Hard_{SUB}^{SUP}(ARG)
                          \NLogSpaceC[sub][sup][arg] = NLogSpace-Complete_{SUB}^{SUP}(Arg)
                        • \ULogSpace[sub][sup][arg] = ULogSpace[Sub](ARG)
                          \verb| ULogSpaceE[sub][sup][arg] = ULogSpace-easy_{sub}^{SUP}(ARG)
                          \verb|\ULogSpaceH[sub][sup][arg]| = ULogSpace-Hard_{SUB}^{SUP}(ARG)
                          \ULogSpaceC[sub][sup][arg] = ULogSpace-Complete_{SUB}^{SUP}(ARG)
                        • ALogSpace[sub][sup][arg] = ALogSpace_{SUB}^{SUP}(ARG)
                          ALogSpaceE[sub][sup][arg] = ALogSpace-Easy_{SUB}^{SUP}(ARG)
                          \ALogSpaceH[sub][sup][arg] = ALogSpace-Hard_{SUB}^{SUP}(Arg)
                          \verb|\ALogSpaceC[sub][sup][arg]| = ALogSpace-Complete_{Sub}^{SUP}(ARG)
                   1194 \defcomclsgrp{LogSpace}
                        • \PTime[sub][sup][arg] = PTIME<sup>SUP</sup><sub>SUR</sub>(ARG)
   \PTime, ...
                          \P \PTimeE[sub] [sup] [arg] = PTIME-EASY<sub>SUB</sub>(ARG)
                          \P \PTimeH[sub] [sup] [arg] = PTIME-HARD_SUB (ARG)
                          \P \PTimeC[sub] [sup] [arg] = PTIME-COMPLETE_SUB(ARG)
                        \label{eq:def:DPTimeE[sub][sup][arg]} DPTimeE[sub][sup][arg] = DPTime-EASY_{SUB}^{SUP}(ARG)
                          \DPTimeH[sub][sup][arg] = DPTIME-HARD_{SUB}^{SUP}(ARG)
                          \DPTimeC[sub][sup][arg] = DPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                        • \NPTime[sub][sup][arg] = NPTIME_{SUB}^{SUP}(ARG)
                          \NPTimeE[sub][sup][arg] = NPTIME-EASY_{SUB}^{SUP}(ARG)
                          \NPTimeH[sub][sup][arg] = NPTIME-HARD_{SUB}^{SUP}(ARG)
                          \NPTimeC[sub][sup][arg] = NPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                       \verb|\UPTimeE[sub][sup][arg]| = UPTIME-EASY_{SUB}^{SUP}(ARG)
                          \UPTimeH[sub][sup][arg] = UPTIME-HARD_{SUB}^{SUP}(ARG)
                          \UPTimeC[sub][sup][arg] = UPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                        • APTime[sub][sup][arg] = APTIME_{SUB}^{SUP}(ARG)
                          \texttt{\APTimeE[sub][sup][arg]} = \operatorname{APTIME-EASY}^{SUP}_{SUB}(\operatorname{ARG})
                          \texttt{\APTimeH[sub][sup][arg]} = APTIME-HARD_{SUB}^{SUP}(ARG)
                          \triangle PTimeC[sub][sup][arg] = APTIME-COMPLETE_{SUB}^{SUP}(ARG)
                   1195 \defcomclsgrp{PTime}
```

•  $\NLogTime[sub][sup][arg] = NLogTime_{SUB}^{SUP}(ARG)$ 

```
\PSpace, ...
                         • \PSpace[sub][sup][arg] = PSPACE_{SUB}^{SUP}(ARG)
                           \verb|\PSpaceE[sub][sup][arg]| = PSPACE-EASY_{SUB}^{SUP}(ARG)
                           \label{eq:pspaceH} $$ \PSpaceH[sub] [sup] [arg] = PSpace-HARD_{SUB}^{SUP}(ARG) 
                           \PSpaceC[sub][sup][arg] = PSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                         • \DPSpace[sub][sup][arg] = DPSPACE_{SUB}^{SUP}(ARG)
                           \label{eq:decomposition} $$ \DPSpaceE[sub][sup][arg] = DPSpace-EASY_{SUB}^{SUP}(ARG) $$
                           \DPSpaceH[sub][sup][arg] = DPSPACE-HARD_{SUB}^{SUP}(ARG)
                           \label{eq:def:DPSpaceC[sub] sup of the definition} \begin{center} [\tt Sup] [\tt arg] = DPSPACE-COMPLETE^{SUP}_{SUB}(ARG) \end{center}
                         • \NPSpace[sub][sup][arg] = NPSPACE_{SUB}^{SUP}(ARG)
                           \NPSpaceE[sub][sup][arg] = NPSPACE-EASY_{SUB}^{SUP}(ARG)
                           \label{eq:NPSpaceH} $$ \NPSpaceH[sub] [sup] [arg] = NPSpace-Hard_{SUB}^{SUP}(ARG) $$
                           \NPSpaceC[sub][sup][arg] = NPSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                         • \UPSpace[sub][sup][arg] = UPSPACE_{SUB}^{SUP}(ARG)
                           \UPSpaceE[sub][sup][arg] = UPSPACE-EASY_{SUB}^{SUP}(ARG)
                           \verb|VPSpaceH[sub][sup][arg]| = UPSPACE-HARD_{SUB}^{SUP}(ARG)
                           \UPSpaceC[sub][sup][arg] = UPSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                         \bullet \ \ \texttt{APSpace[sub][sup][arg]} = \mathrm{APSpace}^{SUP}_{SUB}(ARG)
                           \label{eq:apsilon} $$ \PSpace[sub][sup][arg] = APSpace-EASY_{SUB}^{SUP}(ARG) $$
                           \verb|\APSpaceH[sub][sup][arg]| = APSPACE-HARD_{SUB}^{SUP}(ARG)
                           APSpaceC[sub][sup][arg] = APSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                    1196 \defcomclsgrp{PSpace}
                         • \QPTime[sub][sup][arg] = QPTIME_{SUB}^{SUP}(ARG)
 \QPTime, ...
                           \label{eq:QPTimeEsub} $$ \PTIME-EASY_{SUB}^{SUP}(ARG) = QPTIME-EASY_{SUB}^{SUP}(ARG) $$
                           \label{eq:QPTimeH} $$ \operatorname{QPTIME-HARD}_{SUB}^{SUP}(ARG) = \operatorname{QPTIME-HARD}_{SUB}^{SUP}(ARG) $$
                           \QPTimeC[sub][sup][arg] = QPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • \DQPTime[sub][sup][arg] = DQPTIME_{SUB}^{SUP}(ARG)
                           \verb|\DQPTimeE[sub][sup][arg]| = \mathrm{DQPTIME\text{-}EASY}^{SUP}_{SUB}(\mathrm{ARG})
                           \verb|\DQPTimeH[sub][sup][arg]| = DQPTIME-HARD_{SUB}^{SUP}(ARG)
                           \DQPTimeC[sub][sup][arg] = DQPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • \NQPTime[sub][sup][arg] = NQPTIME_{SUB}^{SUP}(ARG)
                           \NQPTimeE[sub][sup][arg] = NQPTIME-EASY_{SUB}^{SUP}(ARG)
                           \verb|\NQPTimeH[sub][sup][arg]| = NQPTIME-HARD_{SUB}^{SUP}(ARG)
                           \NQPTimeC[sub][sup][arg] = NQPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • \UQPTime[sub][sup][arg] = UQPTIME_{SUB}^{SUP}(ARG)
                           \verb|VQPTimeE[sub][sup][arg]| = \mathrm{UQPTIME\text{-}EASY}^{SUP}_{SUB}(\mathrm{ARG})
                           \verb|VQPTimeH[sub][sup][arg]| = \mathrm{UQPTIME-HARD}^{SUP}_{SUB}(\mathrm{ARG})
                           \UQPTimeC[sub][sup][arg] = UQPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • AQPTime[sub][sup][arg] = AQPTIME_{SUB}^{SUP}(ARG)
                           \texttt{AQPTimeE[sub][sup][arg]} = AQPTIME-EASY_{SUB}^{SUP}(ARG)
                           \Lambda QPTimeH[sub][sup][arg] = AQPTIME-HARD_{SUB}^{SUP}(ARG)
                           \AQPTimeC[sub][sup][arg] = AQPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                    1197 \defcomclsgrp{QPTime}
\QPSpace, ...
                         • \QPSpace[sub][sup][arg] = QPSPACE_{SUB}^{SUP}(ARG)
                           \label{eq:QPSpaceEsub} $$ \operatorname{QPSpace-EASY}^{SUP}_{SUB}(ARG) $$
                           \label{eq:QPSpaceHardsub} $$ \QPSpaceHard_{SUB}^{SUP}(ARG) = QPSpace-Hard_{SUB}^{SUP}(ARG) $$
                           \QPSpaceC[sub][sup][arg] = QPSPACE-COMPLETE_{SUR}^{SUP}(ARG)
                         • \DQPSpace[sub][sup][arg] = DQPSPACE_{SUB}^{SUP}(ARG)
                           \verb|\DQPSpaceE[sub][sup][arg]| = DQPSPACE-EASY_{SUB}^{SUP}(ARG)
                           \verb|\DQPSpaceH[sub][sup][arg]| = \mathrm{DQPSPACE-HARD}^{SUP}_{SUB}(\mathrm{ARG})
                           \DQPSpaceC[sub][sup][arg] = DQPSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                         • \NQPSpace[sub][sup][arg] = NQPSPACE_{SUB}^{SUP}(ARG)
                           \verb|NQPSpaceE[sub][sup][arg]| = NQPSPACE-EASY_{SUB}^{SUP}(ARG)
                           \NQPSpaceH[sub][sup][arg] = NQPSPACE-HARD_{SUB}^{SUP}(ARG)
                           \NQPSpaceC[sub][sup][arg] = NQPSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                         • \UQPSpace[sub][sup][arg] = UQPSPACE_{SUB}^{SUP}(ARG)
                           \verb|VQPSpaceE[sub][sup][arg]| = \mathrm{UQPSpace\text{-}EASY}^{SUP}_{SUB}(ARG)
                           \UQPSpaceH[sub][sup][arg] = UQPSPACE-HARD_{SUB}^{SUP}(ARG)
                           \UQPSpaceC[sub][sup][arg] = UQPSPACE-COMPLETE_{SUB}^{SUP}(ARG)
```

```
\verb|\AQPSpaceH[sub][sup][arg]| = AQPSpace-Hard_{SUB}^{SUP}(ARG)
                           \label{eq:approx} $$ AQPSpaceC[sub][sup][arg] = AQPSpace-COMPLETE_{SUB}^{SUP}(ARG) $$
                    1198 \defcomclsgrp{QPSpace}
 \ExpTime, ...
                         • \ensuremath{\mathsf{ExpTime}}[\mathsf{sub}][\mathsf{sup}][\mathsf{arg}] = \mathsf{ExpTime}^{\mathsf{SUP}}_{\mathsf{SUB}}(\mathsf{ARG})
                           \texttt{\colored}[sub][sup][arg] = EXPTIME-EASY_{SUB}^{SUP}(ARG)
                           \texttt{ExpTimeH[sub][sup][arg]} = \text{ExpTime-HARD}_{\text{SUB}}^{\text{SUP}}(\text{ARG})
                           \ExpTimeC[sub][sup][arg] = EXPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • DExpTime[sub][sup][arg] = DEXPTIME_{SUB}^{SUP}(ARG)
                           \label{eq:decomposition} $$ \DEXPTIME-EASY_{SUB}^{SUP}(ARG) = DEXPTIME-EASY_{SUB}^{SUP}(ARG) $$
                           \DExpTimeH[sub][sup][arg] = DExpTIME-HARD_{SUB}^{SUP}(ARG)
                           \label{eq:decomplete_sub} $$ \DEXPTIME-COMPLETE_{SUB}^{SUP}(ARG) $$
                         • \NExpTime[sub][sup][arg] = NEXPTIME_{SUB}^{SUP}(ARG)
                           \verb|\NExpTimeE[sub][sup][arg]| = NEXPTIME-EASY_{SUB}^{SUP}(ARG)
                           \label{eq:new_new_sub} $$ \NExpTimeH[sub][sup][arg] = NExpTime-HARD_{SUB}^{SUP}(ARG) $$
                           \verb|\NExpTimeC[sub][sup][arg]| = NEXPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • \UExpTime[sub][sup][arg] = UEXPTIME_{SUB}^{SUP}(ARG)
                           \UExpTimeE[sub][sup][arg] = UEXPTIME-EASY_{SUB}^{SUP}(ARG)
                           \verb|\UExpTimeH[sub][sup][arg]| = UEXPTIME-HARD_{SUB}^{SUP}(ARG)
                           \verb|\UExpTimeC[sub][sup][arg]| = UEXPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                         • \Delta ExpTime[sub][sup][arg] = AEXPTIME_{SUB}^{SUP}(ARG)
                           \Delta ExpTimeE[sub][sup][arg] = AEXPTIME-EASY_{SUB}^{SUP}(ARG)
                           \verb|\AExpTimeH[sub][sup][arg]| = AEXPTIME-HARD_{SUB}^{SUP}(ARG)
                           \triangle ExpTimeC[sub][sup][arg] = AEXPTIME-COMPLETE_{SUB}^{SUP}(ARG)
                    1199 \defcomclsgrp{ExpTime}
\ExpSpace, ...
                         • \ExpSpace[sub][sup][arg] = ExpSpace[SUB(ARG)
                           \verb|\ExpSpaceE[sub][sup][arg]| = EXPSPACE-EASY_{SUB}^{SUP}(ARG)
                           \ExpSpaceH[sub][sup][arg] = ExpSpace-Hard_{Sup}^{SUP}(Arg)
                           \ExpSpaceC[sub][sup][arg] = ExpSpace-Complete_{SUB}^{SUP}(ARG)
                         • DExpSpace[sub][sup][arg] = DExpSpace_{SUB}^{SUP}(ARG)
                           \DExpSpaceE[sub][sup][arg] = DExpSpace-Easy_{SUB}^{SUP}(ARG)
                           \DExpSpaceH[sub][sup][arg] = DExpSpace-HARD_{SUB}^{SUP}(ARG)
                           \DExpSpaceC[sub][sup][arg] = DExpSpace-Complete_{SUB}^{SUP}(ARG)
                         • \NExpSpace[sub][sup][arg] = NExpSpace_Sup(ARG)
                           \NExpSpaceE[sub][sup][arg] = NEXPSPACE-EASY_{SUB}^{SUP}(ARG)
                           \verb|NExpSpaceH[sub][sup][arg]| = NExpSpace-Hard_{SUB}^{SUP}(ARG)
                           \label{eq:new_new_power} $$ \NEXPSPACE-COMPLETE_{SUB}^{SUP}(ARG) = NEXPSPACE-COMPLETE_{SUB}^{SUP}(ARG) $$
                         • \UExpSpace[sub][sup][arg] = UExpSpace_Sup(ARG)
                           \label{eq:uexpSpaceE} $$ \UExpSpaceE[sub][sup][arg] = UExpSpace-Easy_{SUB}^{SUP}(ARG) $$
                           \UExpSpaceH[sub][sup][arg] = UExpSpace-Hard_{SUB}^{SUP}(ARG)
                           \UExpSpaceC[sub][sup][arg] = UExpSpace-Complete_{Sub}^{SUP}(Arg)
                         • \Delta ExpSpace[sub][sup][arg] = AExpSpace_{SUB}^{SUP}(ARG)
                           \label{eq:acceleration} $$ \Delta ExpSpace[sub][sup][arg] = AExpSpace-Easy_{SUB}^{SUP}(ARG) $$
                           \label{eq:acceleration} $$ \Delta ExpSpaceH[sub] [sup] [arg] = AExpSpace-Hard_{SUB}^{SUP}(ARG) $$
                           \Delta ExpSpaceC[sub][sup][arg] = AEXPSPACE-COMPLETE_{SUB}^{SUP}(ARG)
                    1200 \defcomclsgrp{ExpSpace}
                    \PH
                         • \PH[sub][sup][par] = PH_{SUB}^{SUP}[PAR]
                    1202 \defcomhrc{PH}
              \WH
                         • \WH[sub][sup][par] = W_{SUB}^{SUP}[PAR]
                    1203 \defcomhrc{WH}[W]
              \AH
                         ullet \AH[sub][sup][par] = A_{SUB}^{SUP}[PAR]
```

•  $AQPSpace[sub][sup][arg] = AQPSPACE_{SUB}^{SUP}(ARG)$ 

 $\verb|AQPSpaceE[sub][sup][arg]| = AQPSPACE-EASY_{SUB}^{SUP}(ARG)$ 

1204 \defcomhrc{AH}[A]

```
ullet \DLH[sub][sup][par] = \Delta_{	ext{SUB}}^{	ext{SUP}}[	ext{PAR}]
    \DLH, \DBH
              ullet \DBH[sub][sup][par] = oldsymbol{\Delta}_{	ext{SUB}}^{	ext{SUP}}[	ext{PAR}]
            1205 \defcomhrc{DLH}[{\mth{\Delta}}]
            1206 \defcomhrc{DBH}[{\mth[mathbf]{\Delta}}]
              ullet \ELH[sub] [sup] [par] = \Sigma_{
m SUB}^{
m SUP}[{
m PAR}]
    \ELH, \EBH
              ullet \EBH[sub][sup][par] = oldsymbol{\Sigma}^{	ext{SUP}}_{	ext{SUB}}[	ext{PAR}]
            1207 \defcomhrc{ELH}[{\mth{\Sigma}}]
            1208 \end{com} $$ 1208 \end{com} [{\bf EBH} [{\bf mathbf}] {\bf sigma} $$ ]
    \ULH, \UBH
              ullet \ULH[sub][sup][par] = \Pi^{
m SUP}_{
m SUB}[{
m PAR}]
              ullet \UBH[sub][sup][par] = oldsymbol{\Pi}^{	ext{SUP}}_{	ext{SUB}}[	ext{PAR}]
            1209 \defcomhrc{ULH}[{\mth{\Pi}}]
            1210 \defcomhrc{UBH}[{\mth[mathbf]{\Pi}}]
            1216 \ifgrp@
            \GrpName, ...
            1218 \newcommand{\grpname}{G}
            1219 \usrmthlatupp{Grp}{Name}{name}[\grpname]
  \VerSet, ... ...
            1220 \mbox{ } \mbox{versym}{v}
            1221 \newcommand{\verset}{V}
            1222 \cmdmthsetext{Ver}[\verset][\versym]
            1223 \cmdmthsymelm{iver}[\versym_{I}]
            1224 \cmdmthsymelm{fver}[\versym_{F}]
      \EdgRel ...
            1225 \newcommand{\edgrel}{E}
            1226 \cmdmthrel{Edg}[\edgrel]
            \PthSet, \pthFun ...
            1228 \newcommand{\pthsym}{\pi}
            1229 \newcommand{\pthset}{Pth}
            1230 \cmdmthsetext{Pth}[\pthset][\pthsym]
            1231 \usrmth{path}{}{argfun}
    \pre, \suc
            1232 \usrmth{pre}{}{oargfun}
            1233 \usrmth{suc}{}{oargfun}
            1234 \fi
            1239 \ifgam@
```

```
\SATG, ... ...
                  1241 %% Satisfiability Games
                  1242 \cmdtxtoparname{SATG}[Sat]
                  1244 %% Validity Games
                  1245 \cmdtxtoparname{VALG}[Val]
                  1247 %% Evaluation Games
                  1248 \cmdtxtoparname{EVLG}[Evl]
                  1250 %% Synthesis Games
                  1251 \cmdtxtoparname{SYNG}[Syn]
                  1253 %% Model-Checking Games
                  1254 \cmdtxtoparname{MCG}[MC]
                  1256 %% Ehrenfeucht-Fraisse Games
                  1257 \cmdtxtoparname{EFG}[EF]
                  \PlrSym, \OppSym
                  1259 \mbox{ \newcommand{\plrsym}{E}}
                  1260 \cmdmthsym{Plr}[\plrsym]
                  1261 \newcommand{\operatorname{Oppsym}}{A}
                  1262 \cmdmthsym{Opp}[\oppsym]
\ArenaName, ... ...
                  1263 \newcommand{\arenaname}{A}
                  1264 \usrmthlatupp{Arena}{Name}{name}[\arenaname]
   \PosSet, ... ...
                  1265 \mbox{ } \mbox{newcommand{\possym}{v}}
                  1266 \newcommand{\posset}{Ps}
                  1267 \cmdmthsetext{Pos}[\posset][\possym]
                  1268 \cmdmthsymelm{ipos}[\possym_{I}]
                  1269 \cmdmthsymelm{fpos}[\possym_{F}]
                  1270 \cmdmthset{PPos} [\posset_{\PlrSym}]
                  1271 \cmdmthsymelm{ppos}[\possym_{\PlrSym}]
                  1272 \cmdmthset{OPos}[\posset_{\OppSym}]
                  1273 \verb|\cmdmthsymelm{opos}[\possym_{\coloredge m}]|
         \PlrFun ...
                  1274 \mbox{ } \mbox{newcommand{\plrfun}{pl}}
                  1275 \cmdmthfun{plr}[\plrfun]
         \MovRel ...
                  1276 \newcommand{\movrel}{Mv}
                  1277 \cmdmthrel{Mov}[\movrel]
 \GameName, ... ...
                  1278 \mbox{ \newcommand{\gamename}{\Game}}
                  1279 \verb|\armthlatupp{Game}{Name}{[name]|} 
         \WinSet ...
                  1280 \newcommand{\winset}{Wn}
                  1281 \cmdmthset{Win}[\winset]
\ObsSet, \obsFun ...
                  1282 \newcommand{\obsset}{Ob}
                  1283 \cmdmthset{Obs}[\obsset]
                  1284 \cmdmthfun{obs}
```

```
\HstSet, ... ...
                  1286 \newcommand{\hstsym}{\varpi}
                  1287 \newcommand{\hstset}{Hst}
                  1288 \cmdmthsetext{Hst}[\hstset][\hstsym]
                  1289 \cmdmthset{PHst}[\hstset_{\PlrSym}]
                  1290 \verb|\cmdmthsymelm{phst}[\hstsym_{\protect\columnwidth}]
                  1291 \cmdmthset{OHst}[\hstset_{\OppSym}]
                  1292 \verb|\cmdmthsymelm{ohst}[\hstsym_{\colored}]|
                  1293 \usrmth{play}{}{argfun}
\PlaySet,\playFun
                  1294 \mbox{ \newcommand{\playsym}{\pi}}
                  1295 \mbox{ \newcommand{\playset}{Play}}
                  1296 \verb|\cmdmthsetext{Play}[\playset][\playsym]|
                  1297 \ \mbox{usrmth{hst}{argfun}}
    \StrSet, ... ...
                  1298 \newcommand{\strsym}{\sigma}
                  1299 \newcommand{\strset}{Str}
                  1300 \cmdmthsetext{Str}[\strset][\strsym]
                  1301 \cmdmthset{PStr}[\strset_{\PlrSym}]
                  1302 \verb|\cmdmthsymelm{pstr}[\strsym_{\prox m}]
                  1303 \cmdmthset{OStr}[\strset_{\OppSym}]
                  1304 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]
\PrfSet, \prfFun ...
                  1305 \newcommand{\prfsym}{\xi}
                  1306 \newcommand{\prfset}{Prf}
                  1307 \cmdmthsetext{Prf}[\prfset][\prfsym]
      \ent, \esc ...
                  1308 \usrmth{ent}{}{oargfun}
                  1309 \usrmth{esc}{}{oargfun}
      \int, \out ...
                  1310 \usrmth{int}{}{oargfun}
                  1311 \usrmth{out}{}{oargfun}
      \atr, \rch ...
                  1312 \usrmth{atr}{}{oargfun}
                  1313 \usrmth{rch}{}{oargfun}
           \lift ...
                  1314 \usrmth{lift}{}{oargfun}
            \sol ...
                  1315 \usrmth{sol}{}{oargfun}
                  \BG, ... ...
                  1317 %% Buchi Games
                  1318 \cmdtxtoparname{BG}
                  1319
                  1320 %% Co-Buchi Games
                  1321 \cmdtxtoparname{CG}
                  1322
                  1323 %% Parity Games
                  1324 \cmdtxtoparname{PG}
                  1326 %% Rabin Games
```

```
1327 \cmdtxtoparname{RG}
          1329 %% Streett Games
          1330 \cmdtxtoparname{SG}
          1332 %% Muller Games
          1333 \cmdtxtoparname{MG}
          \EvnSym, \OddSym
          1335 \newcommand{\evnsym}{0}
          1336 \cmdmthsym{Evn}[\evnsym]
          1337 \newcommand{\oddsym}{1}
          1338 \cmdmthsym{Odd}[\oddsym]
\PrtSet, \prtFun ...
          1339 \newcommand{\prtsym}{p}
          1340 \newcommand{\prtset}{Pr}
          1341 \cmdmthsetext{Prt}[\prtset][\prtsym]
          1342 \cmdmthfun{prt}[pr]
          \EG, ... ...
          1345 %% Energy Games
          1346 \cmdtxtoparname{EG}
          1347
          1348 %% Mean-Payoff Games
          1349 \cmdtxtoparname{MPG}
          1351 %% Discounted-Payoff Games
          1352 \cmdtxtoparname{DPG}
          \MaxSym, \MinSym
          1354 \mbox{newcommand{\maxsym}{\on}}
          1355 \cmdmthsym{Max}[\maxsym]
          1356 \mbox{newcommand{\minsym}{\boxminus}}
          1357 \cmdmthsym{Min}[\minsym]
\WghSet, \wghFun
          1358 \newcommand{\wghsym}{w}
          1359 \newcommand{\wghset}{Wg}
          1360 \cmdmthsetext{Wgh} [\wghset] [\wghsym]
          1361 \cmdmthfun{wgh}[wg]
          1363 \fi
          1368 \iflog@
```

```
\BF, \QBF, ... ...
                  1370 % Boolean Formulae
                  1371 \cmdtxtoparname{BF}
                  1373\ \% Quantified Boolean Formulae
                  1374 \DeclareRobustCommand{\QBF}
                  1375 \{\{\text{txtname}\{Q\}\}\}
                  1376 \DeclareRobustCommand{\EBF}
                        {\ensuremath{\exists}\BF}
                  1378 \DeclareRobustCommand{\UBF}
                        {\ensuremath{\forall}\BF}
                  \LogSig, ... ...
                  1381 \newcommand{\lceil \log sig}{L}
                  1382 \verb|\usrmth|| atupp{Log}{Sig}{sig}[\logsig]
        \Tt, \Ff ...
                  1383 \newcommand{\ttsym}{\top}
                  1384 \operatorname{Tt}{sym}[\operatorname{ttsym}]
                  1385 \newcommand{\ffsym}{\bot}
                  1386 \usrmth{Ff}{}{sym}[\ffsym]
    \LNeg, \LNot ...
                  1387 \newcommand{\lnegsym}{\neg}
                  1388 \usrmth{LNeg}{}{luop}[\lnegsym]
                  1389 \newcommand{\lnotsym}{\sim}
                  1390 \usrmth{LNot}{}{luop}[\lnotsym]
    \LCon, \LDis
                  1391 \newcommand{\lconsym}{\land}
                  1392 \usrmth{LCon}{}{lbop}[\lconsym]
                  1393 \newcommand{\ldissym}{\lor}
                  1394 \usrmth{LDis}{}{lbop}[\ldissym]
    \LImp, \LCoi
                  1395 \newcommand{\limpsym}{\rightarrow}
                   1396 \usrmth{LImp}{}{lbop}[\limpsym]
                   1397 \newcommand{\lcoisym}{\leftrightarrow}
                  1398 \usrmth{LCoi}{}{lbop}[\lcoisym]
    \LExs, \LAll ...
                  1399 \newcommand{\lexssym}{\exists}
                  1400 \usrmth{LExs}{}{luop}[\lexssym]
                  1401 \verb|\newcommand{\lallsym}{\forall}
                  1402 \mbox{ } \mbox{lall}{} \mbox{luop}[\mbox{lallsym}]
     \APSet, ... ...
                  1403 \mbox{ newcommand{\apsym}{p}}
                  1404 \newcommand{\apset}{AP}
                  1405 \cmdmthsetext{AP}[\apset][\apsym]
                  1406 \usrmth{ap}{}{argfun}
            \sub ...
                  1407 \mbox{ \normth{sub}{{}}{argfun}}
\Cnt, \Qnt, \Sym ...
                  1408 \usrmth{Cnt}{}{sym}[C]
                  1409 \usrmth{Qnt}{\sym}[Q]
                  1410 \usrmth{Sym}{}{sym}[\odot]
```

```
\QAE, \QEA ...
               1411 \usrmth{QAE}{}{sym}[\forall\exists]
              1412 \verb|\armth{QEA}{{}} sym{$[\exists\forall]$}
  \QntSet, ... ...
              1413 \newcommand{\qntsym}{\wp}
              1414 \neq \{Qn\}
              1415 \cmdmthsetext{Qnt}[\qntset][\qntsym]
 \free, \bound ...
              1416 \usrmth{free}{}{argfun}
              1417 \usrmth{bound}{}{argfun}
    \dep, \alt ...
               1418 \usrmth{dep}{}{argfun}
              1419 \usrmth{alt}{}{argfun}
\cnf, \dnf, ... ...
              1420 \cmdtxtabr{cnf}
              1421 \cmdtxtabr{dnf}
              1422 \cmdtxtabr{pnf}
              1423 \cmdtxtabr{nnf}
              \LogStr, ... ...
              1425 \mbox{logstr}{L}
              1426 \usrmthlatupp{Log}{Str}{str}[\logstr]
  \ValSet, ... ...
              1427 \newcommand{\valsym}{\xi}
              1428 \mbox{ \newcommand{\valset}{Val}}
              1429 \cmdmthsetext{Val}[\valset][\valsym]
  \AsgSet, ... ...
               1430 \newcommand{\asgsym}{\chi}
              1431 \newcommand{\asgset}{Asg}
              1432 \cmdmthsetext{Asg}[\asgset][\asgsym]
              \FOL, ... ...
              1434 % First-Order Logic
              1435 \cmdtxtoparname{FOL}[Fol]
              1436 \cmdtxtoparname{F0}[F0]
              1437
              1438 % Monadic First-Order Logic
              1439 \DeclareRobustCommand{\MFOL}
              1440 \{\{\text{txtname}\{M\}\}\}\
              1441 \DeclareRobustCommand{\MF0}
              1442 \quad \{\{\text{txtname}\{M\}\}\} \}
              \VarSig, ... ...
              1444 \newcommand{\varsig}{V}
               1445 \usrmthlatupp{Var}{Sig}{sig}[\varsig]
              1446 \newcommand{\varsym}{x}
              1447 \newcommand{\varset}{Vr}
              1448 \cmdmthsetext{Var}[\varset][\varsym]
              1449 \usrmth{var}{}{argfun}[vr]
               1450 \usrmth{dim}{}{argfun}[dm]
```

```
\ConSig, ... ...
                                                                           1451 \neq \{c\}
                                                                           1452 \usrmthlatupp{Con}{Sig}{sig}[\consig]
                                                                            1453 \mbox{ } \mbox{consym}{c}
                                                                            1454 \mbox{ }\mbox{conset}{Cn}
                                                                             1455 \cmdmthsetext{Con}[\conset][\consym]
                                                                             1456 \usrmth{con}{}{argfun}[cn]
    \FunSig, ... ...
                                                                           1457 \newcommand{\funsig}{F}
                                                                            1458 \usrmthlatupp{Fun}{Sig}{sig}[\funsig]
                                                                            1459 \mbox{ } \mbox
                                                                             1460 \mbox{ } \mbox{newcommand{\funset}{Fn}}
                                                                             1461 \cmdmthsetext{Fun}[\funset][\funsym]
                                                                             1462 \operatorname{lusrmth} \{fun\} \{\} \{argfun\} [fn]
                                                                             1463 \usrmth{art}{}{argfun}[ar]
    \TerSig, ... ...
                                                                           1464 \newcommand{\tersig}{T}
                                                                            1465 \verb|\usrmth|| 1465
                                                                             1466 \mbox{ } \mbox{newcommand{\tersym}{t}}
                                                                             1467 \newcommand{\terset}{Tr}
                                                                             1468 \cmdmthsetext{Ter}[\terset][\tersym]
                                                                            1469 \verb|\argfun|| \\
    \RelSig, ... ...
                                                                            1470 \mbox{ } \mbox{newcommand{\relsig}{R}}
                                                                            1471 \usrmthlatupp{Rel}{Sig}{sig}[\relsig]
                                                                             1472 \newcommand{\relsym}{r}
                                                                            1473 \newcommand{\relset}{Rl}
                                                                            1474 \cmdmthsetext{Rel}[\relset][\relsym]
                                                                            1475 \usrmth{rel}{}{argfun}[rl]
                                              \skm ...
                                                                           1476 \usrmth{skm}{}{argfun}
                                                                            \ConStr, ... ...
                                                                            1478 \newcommand{\constr}{C}
                                                                            1479 \usrmthlatupp{Con}{Str}{str}[\constr]
    \FunStr, ... ...
                                                                            1480 \mbox{ } \mbox{newcommand{\funstr}{F}}
                                                                            1481 \usrmthlatupp{Fun}{Str}{str}[\funstr]
    \TerStr, ... ...
                                                                            1482 \mbox{ } \mbox
                                                                            1483 \usrmthlatupp{Ter}{Str}{str}[\terstr]
    \RelStr, ... ...
                                                                           1484 \newcommand{\relstr}{R}
                                                                            1485 \usrmthlatupp{Rel}{Str}{str}[\relstr]
                                                                             \DF, \IF, ... ...
                                                                            1487 % Dependence-Friendly Logic
                                                                            1488 \cmdtxtoparname{DF}
                                                                             1490 % Independence-Friendly Logic
                                                                             1491 \cmdtxtoparname{IF}
                                                                             1492
```

```
1493 % Dependence/Independence-Friendly Logic
              1494 \cmdtxtoparname{DIF}
              1495
              1496 % Dependence Logic
              1497 \cmdtxtoparname{DL}
              1499 % Team Logic
              1500 \cmdtxtoparname{TL}
              1502 % Alternating Dependence-Friendly Logic
              1503 \cmdtxtoparname{ADF}
              1505\,\% Alternating Independence-Friendly Logic
              1506 \cmdtxtoparname{AIF}
              1507
              1508\;\text{\%} Alternating Dependence/Independence-Friendly Logic
              1509 \cmdtxtoparname{ADIF}
              \LEExs, \LAA11
              1511 \newcommand{\leexssym}{\Sigma}
              1512 \usrmth{LEExs}{}{luop}[\leexssym]
              1513 \newcommand{\laallsym}{\Pi}
              1514 \usrmth{LAAll}{}{luop}[\laallsym]
              \SOL, ... ...
             1517 % Second-Order Logic
              1518 \cmdtxtoparname{SOL} [Sol]
             1519 \cmdtxtoparname{SO}
             1520
             1521 % Weak Second-Order Logic
              1522 \DeclareRobustCommand{\WSOL}
                  {{\txtname{W}}\SOL}
              1524 \DeclareRobustCommand{\WSO}
                  {{\txtname{W}}\SO}
              1525
              1526
              1527 % coWeak Second-Order Logic
              1528 \DeclareRobustCommand{\coWSOL}
                  {{\txtname{coW}}\SOL}
             1530 \DeclareRobustCommand{\coWSO}
             1531
                  {{\txtname{coW}}\SO}
             1532
             1533 % Monadic Second-Order Logic
              1534 \DeclareRobustCommand{\MSOL}
             1535 {{\txtname{M}}\SOL}
              1536 \DeclareRobustCommand{\MSO}
                  {{\txtname{M}}\SO}
             1538
             1539 % Weak Monadic Second-Order Logic
             1540 \DeclareRobustCommand{\WMSOL}
                  {{\txtname{W}}\MSOL}
             1542 \DeclareRobustCommand{\WMSO}
                  {{\txtname{W}}\MSO}
             1543
             1544
              1545 % coWeak Monadic Second-Order Logic
              1546 \DeclareRobustCommand{\coWMSOL}
```

```
{{\txtname{coW}}\MSOL}
              1548 \DeclareRobustCommand{\coWMSO}
                  {{\txtname{coW}}\MSO}
             \FVarSet, ...
             1551 \newcommand{\fvarsym}{x}
             1552 \newcommand{\fvarset}{FVr}
             1553 \cmdmthsetext{FVar}[\fvarset][\fvarsym]
\SVarSet, ... ...
             1554 \newcommand{\svarsym}{X}
             1555 \newcommand{\svarset}{SVr}
              1556 \cmdmthsetext{SVar}[\svarset][\svarsym]
              \TL, \PL, ... ...
             1559 % Tree Logic
             1560 \cmdtxtoparname{TL}
             1561
             1562 % Weak Tree Logic
             1563 \DeclareRobustCommand{\WTL}
                   {\{\text{txtname}\{W\}}\}\TL\}
             1564
             1565
             1566 % coWeak Tree Logic
              1567 \DeclareRobustCommand{\coWTL}
                  {\{\text{txtname}\{\text{coW}\}\}\}}
              1569
             1570\ \% Monadic Tree Logic
             1571 \DeclareRobustCommand{\MTL}
                   {\{\text{txtname}\{M\}}\TL\}
             1572
             1573
              1574 % Weak Monadic Tree Logic
              1575 \DeclareRobustCommand{\WMTL}
                  {{\txtname{W}}\MTL}
              1577
              1578 % coWeak Monadic Tree Logic
              1579 \DeclareRobustCommand{\coWMTL}
              1580 \quad \{\{\texttt{txtname}\{\texttt{coW}\}\} \setminus \texttt{MTL}\}
              1581
              1582 % Path Logic
             1583 \cmdtxtoparname{PL}
              1585 % Weak Path Logic
              1586 \DeclareRobustCommand{\WPL}
                   {\{\txtname{W}}\tylength{W}}\tylength{V}
             1587
              1589 % coWeak Path Logic
              1590 \DeclareRobustCommand{\coWPL}
              1591
                   {\{\text{coW}}\
              1592
              1593 % Monadic Path Logic
              1594 \DeclareRobustCommand{\MPL}
                   {\{\text{N}}\
              1595
              1596
              1597 % Weak Monadic Path Logic
              1598 \DeclareRobustCommand{\WMPL}
                   {{\txtname{W}}\MPL}
              1600
```

```
1601 % coWeak Monadic Path Logic
            1602 \DeclareRobustCommand{\coWMPL}
            1603 \{\{\text{txtname}\{\text{coW}\}\}\}
            \ML, \GML, ... ...
            1607 % Modal Logic
            1608 \cmdtxtoparname{ML}
            1610 % Graded Modal Logic
            1611 \DeclareRobustCommand{\GML}
                {\{\text{txtname}\{G\}\}\setminus ML\}}
            1612
            1614 % Quantified Modal Logic
            1615 \DeclareRobustCommand{\QML}
            1616 \{\{\text{txtname}\{Q\}\}\}ML\}
            1617 \DeclareRobustCommand{\EML}
            1618 {\ensuremath{\exists}\ML}
            1619 \DeclareRobustCommand{\UML}
            1620 {\ensuremath{\forall}\ML}
            \Opr ...
            1622 \usrmth{Opr}{}{sym}[Op]
 \DMod, \BMod ...
            1623 \usrmth{DMod}{}{sym}[\Diamond]
            1624 \usrmth{BMod}{}{sym}[\Box]
   \Exs, \All ...
            1625 \DeclareRobustCommand{\Exs}
            1626 {\c} {\c} {\c} {\c} {\c} {\c} {\c} {\c}
            1627 \DeclareRobustCommand{\@sexs}[1]
            1628 {\mth{\DMod}[#1]}
            1629 \DeclareRobustCommand{\@exs}[1]
            1631 \DeclareRobustCommand{\All}
            1632 {\@ifstar{\@sall}{\@all}}
            1633 \DeclareRobustCommand{\@sall}[1]
                {\mth{\BMod}[#1]}
            1635 \DeclareRobustCommand{\@all}[1]
            1636 \quad \{\mth{\c}^{1636} \  \  \{\mth{\c}^{1636} \  \  \} \}
            \KrpStr, ... ...
            1638 \newcommand{\krpstr}{K}
            1639 \usrmthlatupp{Krp}{Str}{str}[\krpstr]
 \WrlSet, ... ...
            1640 \verb|\newcommand{\wrlsym}{w}|
            1641 \newcommand{\wrlset}{W}
            1642 \cmdmthsetext{Wrl}[\wrlset][\wrlsym]
            1643 \cmdmthsymelm{iwrl}[\wrlsym_{I}]
```

```
\AccRel, \TrnRel
               1644 \newcommand{\accsym}{R}
               1645 \cmdmthrel{Acc}[\accsym]
               1646 \verb|\cmdmthrel{Trn}| [\verb|\accsym|]|
       \labFun ...
               1647 \mbox{ \newcommand{\labsym}{\labsym}{\labsym}}
               1648 \cmdmthfun{lab}[\labsym]
   \PthSet, ...
               1649 \providecommand{\pthsym}{\pi}
               1650 \providecommand{\phithset}{Pth}
               1651 \cmdmthsetext{Pth} [\pthset] [\pthsym]
               1652 \usrmth{path}{}{argfun}
               \MC, \GMC, ...
               1654 % Mu Calculus
               1655 \cmdtxtoparname{MC}[\ensuremath{\mu}-Calculus]
               1657 % Graded Mu Calculus
               1658 \DeclareRobustCommand{\GMC}
               1659
                    {{\txtname{G}}\MC}
               1661 % Quantified Mu Calculus
               1662 \DeclareRobustCommand{\QMC}
                   {\{\text{txtname}\{Q\}\}\setminus MC\}}
               1664 \DeclareRobustCommand{\EMC}
               1665 {\ensuremath{\exists}\MC}
               1666 \verb|\DeclareRobustCommand{\UMC}|
                    {\ensuremath{\forall}\MC}
               1667
               1668
               1669 % Alternation-Free Mu Calculus
               1670 \DeclareRobustCommand{\AFMC}
                    {{\txtname{AF}}\MC}
               1672
               1673 % Alternation-Free Graded Mu Calculus
               1674 \DeclareRobustCommand{\AFGMC}
               1675
                    {{\txtname{AF}}\GMC}
               1676
               1677 % Quantified Alternation-Free Mu Calculus
               1678 \DeclareRobustCommand{\QAFMC}
                    {{\txtname{Q}}\AFMC}
               1680 \DeclareRobustCommand{\EAFMC}
                    {\ensuremath{\exists}\AFMC}
               1682 \DeclareRobustCommand{\UAFMC}
               1683
                    {\ensuremath{\forall}\AFMC}
               1684
               \PTL, \LTL, ...
               1688 % Propositional Temporal Logic
               1689 \cmdtxtoparname{PTL}
               1691 % Quantified Propositional Temporal Logic
```

```
1692 \DeclareRobustCommand{\QPTL}
                    {\{\text{txtname}\{Q\}\}\PTL\}}
               1694 \DeclareRobustCommand{\EPTL}
               1695 {\ensuremath{\exists}\PTL}
               1696 \DeclareRobustCommand{\UPTL}
                    {\ensuremath{\forall}\PTL}
               1697
               1698
               1699 % Linear Temporal Logic
               1700 \cmdtxtoparname{LTL}
               1702 % Quantified Linear Temporal Logic
               1703 \DeclareRobustCommand{\QLTL}
                    {\{\text{txtname}\{Q\}\}\setminus LTL\}}
               1705 \DeclareRobustCommand{\ELTL}
               1706 {\ensuremath{\exists}\LTL}
               1707 \DeclareRobustCommand{\ULTL}
               1708 {\ensuremath{\forall}\LTL}
               \X, ... ...
               1710 \usrmth{X}{}{sym}[X\,]
               1711 \usrmth{F}{}{sym}[F\,]
               1712 \usrmth{G}{}{sym}[G\,]
               1713 \usrmth{U}{}{sym}[\,U\,]
               1714 \usrmth{R}{}{sym}[\,R\,]
       \Y, ... ...
               1715 \usrmth{Y}{}{sym}[G\,]
               1716 \usrmth{P}{}{sym}[P\,]\let\SavePilcrow\P
               1717 \usrmth{H}{}{sym}[H\,]\let\SaveDoubleAcute\H
               1718 \usrmth{S}{}{sym}[\,S\,]\let\SaveSectionSymbol\S
               1719 \usrmth{B}{}{sym}[\,B\,]
               \PDL, \CTL, ...
               1722 % Propositional Dynamic Logic
               1723 \cmdtxtoparname{PDL}
               1725 % Computation Tree Logic
               1726 \cmdtxtoparname{CTL}
               1728 % Weak Computation Tree Logic
               1729 \DeclareRobustCommand{\WCTL}
               1730
                    {{\txtname{W}}\CTL}
               1731
               1732 % Quantified Computation Tree Logic
               1733 \DeclareRobustCommand{\QCTL}
                    {\{\text{txtname}\{Q\}\}\CTL\}}
               1735 \DeclareRobustCommand{\ECTL}
                    {\ensuremath{\exists}\CTL}
               1737 \DeclareRobustCommand{\UCTL}
                    {\ensuremath{\forall}\CTL}
               1738
               1739
               1740 % Improved Computation Tree Logic
               1741 \cmdtxtoparname{CTLP}[CTL$^{+}$]
               1743 % Weak Improved Computation Tree Logic
               1744 \DeclareRobustCommand{\WCTLP}
               1745 \{\{\text{txtname}\{W\}\}\
```

```
1747 % Quantified Improved Computation Tree Logic
          1748 \DeclareRobustCommand{\QCTLP}
          1749 \quad \{\{\texttt{\txtname}\{\texttt{Q}\}\}\texttt{\txtname}\}
          1750 \DeclareRobustCommand{\ECTLP}
          1751 {\ensuremath{\exists}\CTLP}
          1752 \DeclareRobustCommand{\UCTLP}
               {\ensuremath{\forall}\CTLP}
          1753
          1754
          1755 % Full Computation Tree Logic
          1756 \cmdtxtoparname{CTLS}[CTL*]
          1758 % Weak Full Computation Tree Logic
          1759 \DeclareRobustCommand{\WCTLS}
               {{\txtname{W}}\CTLS}
          1760
          1761
          1762 % Quantified Full Computation Tree Logic
          1763 \DeclareRobustCommand{\QCTLS}
               {\{\text{txtname}\{Q\}\}\}\
          1765 \DeclareRobustCommand{\ECTLS}
               {\ensuremath{\exists}\CTLS}
          1767 \DeclareRobustCommand{\UCTLS}
              {\ensuremath{\forall}\CTLS}
          \E, \A ...
          1770 \operatorname{LSYM}{E}{sym}
          1771 \usrmth{A}{}{sym}
          \ATL, ... ...
          1774 % Alternating Temporal Logic
          1775 \cmdtxtoparname{ATL}
          1776
          1777 % Weak Alternating Tree Logic
          1778 \DeclareRobustCommand{\WATL}
               {\{\text{txtname}\{W\}}\ATL\}
          1781 % Quantified Alternating Temporal Logic
          1782 \DeclareRobustCommand{\QATL}
          1783 \{\{\text{txtname}\{Q\}\}\} ATL\}
          1784 \DeclareRobustCommand{\EATL}
          1785 {\ensuremath{\exists}\ATL}
          1786 \DeclareRobustCommand{\UATL}
               {\ensuremath{\forall}\ATL}
          1789 % Improved Alternating Temporal Logic
          1790 \cmdtxtoparname{ATLP}[ATL$^{+}$]
          1792\ \mbox{\ensuremath{\mbox{\%}}} Weak Improved Alternating Tree Logic
          1793 \DeclareRobustCommand{\WATLP}
               {{\txtname{W}}\ATLP}
          1794
          1795
          1796\ \% Quantified Improved Alternating Temporal Logic
          1797 \DeclareRobustCommand{\QATLP}
               {{\txtname{Q}}\ATLP}
          1799 \DeclareRobustCommand{\EATLP}
               {\ensuremath{\exists}\ATLP}
          1801 \DeclareRobustCommand{\UATLP}
```

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```
1802
                   {\ensuremath{\forall}\ATLP}
             1803
             1804 % Full Alternating Temporal Logic
             1805 \verb| \cmdtxtoparname{ATLS}[ATL*]|
             1807 % Weak Full Alternating Tree Logic
             1808 \DeclareRobustCommand{\WATLS}
                   {{\txtname{W}}\ATLS}
             1810
             1811 % Quantified Full Alternating Temporal Logic
             1812 \DeclareRobustCommand{\QATLS}
                  {{\txtname{Q}}\ATLS}
             1814 \DeclareRobustCommand{\EATLS}
                  {\ensuremath{\exists}\ATLS}
             1816 \DeclareRobustCommand{\UATLS}
             1817 {\ensuremath{\forall}\ATLS}
             \EExs, \AAll ...
             1819 \DeclareRobustCommand{\EExs}[1]
                   {\mth{\argmid{\langle\!\langle}{\defval{#1}{\emptyset}}}{\rangle\!\rangle}}}
             1821 \DeclareRobustCommand{\AAll}[1]
             \label{left[\eff[} {\eff[}_{\eff}]} in $\mathbb{F}_{\eff} \simeq \mathbb{F}_{\eff} \
             \CGS
             1824 \cmdtxtname{CGS}
\CGSStr, ... ...
             1825 \mbox{ \newcommand{\cgsstr}{G}}
             1826 \usrmthlatupp{CGS}{Str}{str}[\cgsstr]
\AgnSet, ... ...
             1827 \newcommand{\agnsym}{a}
             1828 \newcommand{\agnset}{Ag}
             1829 \cmdmthsetext{Agn}[\agnset][\agnsym]
\ActSet, ... ...
             1830 \newcommand{\actsym}{c}
             1831 \newcommand{\actset}{Ac}
             1832 \cmdmthsetext{Act}[\actset][\actsym]
\PosSet, ... ...
             1833 \providecommand{\possym}{v}
             1834 \displaystyle \frac{providecommand{posset}{Ps}}
             1835 \cmdmthsetext{Pos}[\posset][\possym]
             1836 \cmdmthsymelm{ipos}[\possym_{I}]
             1837 \cmdmthsymelm{fpos}[\possym_{F}]
             1838 \cmdmthset{PPos}[\posset_{\PlrSym}]
             1839 \cmdmthsymelm{ppos}[\possym_{\PlrSym}]
             1840 \cmdmthset{OPos}[\posset_{\OppSym}]
             1841 \cmdmthsymelm{opos}[\possym_{\OppSym}]
\SttSet, ... ...
             1842 \mbox{ newcommand{\sttsym}{s}}
             1843 \mbox{ } \mbox{newcommand{\sttset}{St}}
             1844 \cmdmthsetext{Stt}[\sttset][\sttsym]
             1845 \cmdmthset{IStt}[\sttset_{I}]
             1846 \cmdmthsymelm{istt}[\sttsym_{I}]
             1847 \cmdmthset{FStt}[\sttset_{F}]
             1848 \cmdmthsymelm{fstt}[\sttsym_{F}]
```

```
\DecSet, ... ...
                  1849 \mbox{ \newcommand{\decsym}{d}}
                  1850 \mbox{ \newcommand{\decset}{Dc}}
                  1851 \cmdmthsetext{Dec}[\decset][\decsym]
\movFun, \movRel
                  1852 \mbox{ \newcommand{\movsym}{\tau}}
                  1853 \cmdmthfun{mov} [\movsym]
                  1854 \cmdmthrel{mov}[\movsym]
\trnFun, \trnRel
                  1855 \newcommand{\trnsym}{\delta}
                  1856 \cmdmthfun{trn}[\trnsym]
                  1857 \cmdmthrel{trn}[\trnsym]
         \PrfSet ...
                  1858 \providecommand{\prfsym}{\xi}
                  1859 \providecommand{\prfset}{Prf}
                  1860 \cmdmthsetext{Prf}[\prfset][\prfsym]
    \HstSet, ... ...
                  1861 \providecommand{\hstsym}{\varpi}
                  1862 \providecommand{\hstset}{Hst}
                  1863 \cmdmthsetext{Hst}[\hstset][\hstsym]
                  1864 \cmdmthset{PHst}[\hstset_{\PlrSym}]
                  1865 \verb|\cmdmthsymelm{phst}[\hstsym_{\PlrSym}]|
                  1866 \cmdmthset{OHst}[\hstset_{\OppSym}]
                  1867 \verb|\cmdmthsymelm{ohst}[\hstsym_{\colored}]|
                  1868 \usrmth{hst}{}{argfun}
   \PlaySet, ... ...
                  1869 \providecommand{\playsym}{\pi}
                  1870 \providecommand{\playset}{Play}
                  1871 \cmdmthsetext{Play}[\playset][\playsym]
                  1872 \operatorname{lusrmth} \{play\} \{\} \{argfun\}
    \PlnSet, ... ...
                  1873 \providecommand{\plnsym}{\rho}
                  1874 \providecommand{\plnset}{Pln}
                  1875 \cmdmthsetext{Pln}[\plnset][\plnsym]
                  1876 \cmdmthset{PPln}[\plnset_{\PlrSym}]
                  1877 \cmdmthsymelm{pPln}[\plnsym_{\PlrSym}]
                  1878 \cmdmthset{OPln}[\plnset_{\OppSym}]
                  1879 \cmdmthsymelm{oPln}[\plnsym_{\OppSym}]
    \StrSet, ... ...
                  1880 \providecommand{\strsym}{\sigma}
                  1881 \providecommand{\strset}{Str}
                  1882 \cmdmthsetext{Str}[\strset][\strsym]
                  1883 \cmdmthset{PStr}[\strset_{\PlrSym}]
                  1884 \cmdmthsymelm{pstr}[\strsym_{\PlrSym}]
                  1885 \cmdmthset{OStr}[\strset_{\OppSym}]
                  1886 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]
                  \PL, ... ...
                  1888 % Plan Logic
                  1889 \cmdtxtoparname{PL}
                  1890
                  1891 \DeclareRobustCommand{\EPL}
                  1892 {\ensuremath{\exists}\PL}
```

```
1893 \DeclareRobustCommand{\UPL}
1894
      {\ensuremath{\forall}\PL}
1895
1896 \DeclareRobustCommand{\FPL}
1897
     {\{\text{txtname}\{F\}}\PL\}
1898
1899 \DeclareRobustCommand{\EFPL}
     {\ensuremath{\exists}\FPL}
1900
1901 \DeclareRobustCommand{\UFPL}
      {\ensuremath{\forall}\FPL}
1903
1904 % One-Goal Plan Logic
1905 \DeclareRobustCommandx{\OGPL}[3][1=, 2=, 3=]
      {\PL[#1][#2][1g\arglef{,}{#3}]}
1906
1907
1908 \DeclareRobustCommand{\EOGPL}
      {\ensuremath{\exists}\OGPL}
1910 \DeclareRobustCommand{\UOGPL}
1911
      {\ensuremath{\forall}\OGPL}
1912
1913 \DeclareRobustCommand{\FOGPL}
      {{\txtname{F}}\OGPL}
1914
1915
1916 \DeclareRobustCommand{\EFOGPL}
      {\ensuremath{\exists}\FOGPL}
1917
1918 \DeclareRobustCommand{\UFOGPL}
      {\ensuremath{\forall}\FOGPL}
1919
1920
1921 % Conjunctive-Goal Plan Logic
1922 \DeclareRobustCommandx{\CGPL}[3][1=, 2=, 3=]
      {\PL[#1][#2][cg\arglef{,}{#3}]}
1923
1925 \DeclareRobustCommand{\ECGPL}
1926
      {\ensuremath{\exists}\CGPL}
1927 \DeclareRobustCommand{\UCGPL}
      {\ensuremath{\forall}\CGPL}
1928
1929
1930 \DeclareRobustCommand{\FCGPL}
      {{\txtname{F}}\CGPL}
1931
1932
1933 \DeclareRobustCommand{\EFCGPL}
      {\ensuremath{\exists}\FCGPL}
1935 \DeclareRobustCommand{\UFCGPL}
     {\ensuremath{\forall}\FCGPL}
1938 % Disjunctive-Goal Plan Logic
1939 \DeclareRobustCommandx{\DGPL}[3][1=, 2=, 3=]
1940
     {\PL[#1][#2][dg\arglef{,}{#3}]}
1941
1942 \DeclareRobustCommand{\EDGPL}
     {\ensuremath{\exists}\DGPL}
1944 \DeclareRobustCommand{\UDGPL}
      {\ensuremath{\forall}\DGPL}
1947 \DeclareRobustCommand{\FDGPL}
1948
      {{\txtname{F}}\DGPL}
1949
1950 \DeclareRobustCommand{\EFDGPL}
      {\ensuremath{\exists}\FDGPL}
1951
1952 \DeclareRobustCommand{\UFDGPL}
      {\ensuremath{\forall}\FDGPL}
1953
1954
1955 % Alternating-Goal Plan Logic
```

```
1956 \DeclareRobustCommandx{\AGPL}[3][1=, 2=, 3=]
1957
      {\PL[#1][#2][ag\arglef{,}{#3}]}
1958
1959 \DeclareRobustCommand{\EAGPL}
1960
      {\ensuremath{\exists}\AGPL}
1961 \DeclareRobustCommand{\UAGPL}
      {\ensuremath{\forall}\AGPL}
1962
1963
1964 \DeclareRobustCommand{\FAGPL}
      {\{\text{txtname}\{F\}\}\setminus AGPL\}}
1965
1967 \DeclareRobustCommand{\EFAGPL}
      {\ensuremath{\exists}\FAGPL}
1969 \DeclareRobustCommand{\UFAGPL}
      {\ensuremath{\forall}\FAGPL}
1970
1971
1972 % Extended-Goal Plan Logic
1973 \DeclareRobustCommandx{\EGPL}[3][1=, 2=, 3=]
      {\PL[#1][#2][eg\arglef{,}{#3}]}
1976 \DeclareRobustCommand{\EEGPL}
      {\ensuremath{\exists}\EGPL}
1978 \DeclareRobustCommand{\UEGPL}
      {\ensuremath{\forall}\EGPL}
1979
1980
1981 \DeclareRobustCommand{\FEGPL}
      {\{\text{txtname}\{F\}\}\setminus EGPL\}}
1982
1983
1984 \DeclareRobustCommand{\EFEGPL}
      {\ensuremath{\exists}\FEGPL}
1986 \DeclareRobustCommand{\UFEGPL}
      {\ensuremath{\forall}\FEGPL}
1988
1989 % Boolean-Goal Plan Logic
1990 \DeclareRobustCommandx{\BGPL}[3][1=, 2=, 3=]
      {\PL[#1][#2][bg\arglef{,}{#3}]}
1991
1992
1993 \DeclareRobustCommand{\EBGPL}
      {\ensuremath{\exists}\BGPL}
1994
1995 \DeclareRobustCommand{\UBGPL}
1996
      {\ensuremath{\forall}\BGPL}
1998 \DeclareRobustCommand{\FBGPL}
1999
      {{\txtname{F}}\BGPL}
2000
2001 \DeclareRobustCommand{\EFBGPL}
     {\ensuremath{\exists}\FBGPL}
2003 \DeclareRobustCommand{\UFBGPL}
      {\ensuremath{\forall}\FBGPL}
2004
2005
2006 % Undefined-Goal Plan Logic
2007 \DeclareRobustCommandx{\XGPL}[3][1=, 2=, 3=]
      {\PL[#1][#2][xg\arglef{,}{#3}]}
2009
2010 \DeclareRobustCommand{\EXGPL}
      {\ensuremath{\exists}\XGPL}
2012 \DeclareRobustCommand{\UXGPL}
2013
      {\ensuremath{\forall}\XGPL}
2014
2015 \DeclareRobustCommand{\FXGPL}
2016
      {{\txtname{F}}\XGPL}
2018 \DeclareRobustCommand{\EFXGPL}
```

```
{\ensuremath{\exists}\FXGPL}
          2020 \DeclareRobustCommand{\UFXGPL}
               {\ensuremath{\forall}\FXGPL}
\SL, ... ...
          2022 % Strategy Logic
          2023 \cmdtxtoparname{SL}
          2024
          2025 \DeclareRobustCommand{\ESL}
                {\ensuremath{\exists}\SL}
          2027 \DeclareRobustCommand{\USL}
          2028
                {\ensuremath{\forall}\SL}
          2029
          2030 \DeclareRobustCommand{\FSL}
                {\{\text{txtname}\{F\}\}\SL\}}
          2031
          2032
          2033 \DeclareRobustCommand{\EFSL}
                {\ensuremath{\exists}\FSL}
          2035 \DeclareRobustCommand{\UFSL}
                {\ensuremath{\forall}\FSL}
          2037
          2038 % One-Goal Strategy Logic
          2039 \DeclareRobustCommandx{\OGSL}[3][1=, 2=, 3=]
                {\SL[#1][#2][1g\arglef{,}{#3}]}
          2041
          2042 \DeclareRobustCommand{\EOGSL}
                {\ensuremath{\exists}\OGSL}
          2044 \DeclareRobustCommand{\UOGSL}
          2045
                {\ensuremath{\forall}\OGSL}
          2047 \DeclareRobustCommand{\FOGSL}
                {{\txtname{F}}\OGSL}
          2049
          2050 \DeclareRobustCommand{\EFOGSL}
                {\ensuremath{\exists}\FOGSL}
          2052 \DeclareRobustCommand{\UFOGSL}
                {\ensuremath{\forall}\FOGSL}
          2053
          2055 % Conjunctive-Goal Strategy Logic
          2056 \DeclareRobustCommandx{\CGSL}[3][1=, 2=, 3=]
          2057
                {\SL[#1][#2][cg\arglef{,}{#3}]}
          2058
          2059 \DeclareRobustCommand{\ECGSL}
                {\ensuremath{\exists}\CGSL}
          2061 \DeclareRobustCommand{\UCGSL}
                {\ensuremath{\forall}\CGSL}
          2062
          2063
          2064 \DeclareRobustCommand{\FCGSL}
                {{\txtname{F}}\CGSL}
          2065
          2066
          2067 \DeclareRobustCommand{\EFCGSL}
                {\ensuremath{\exists}\FCGSL}
          2069 \DeclareRobustCommand{\UFCGSL}
                {\ensuremath{\forall}\FCGSL}
          2072 % Disjunctive-Goal Strategy Logic
          2073 \DeclareRobustCommandx{\DGSL}[3][1=, 2=, 3=]
                {\SL[#1][#2][dg\arglef{,}{#3}]}
          2075
          2076 \DeclareRobustCommand{\EDGSL}
                {\ensuremath{\exists}\DGSL}
          2078 \DeclareRobustCommand{\UDGSL}
                {\ensuremath{\forall}\DGSL}
          2080
```

```
2081 \DeclareRobustCommand{\FDGSL}
2082
     {{\txtname{F}}\DGSL}
2083
2084 \DeclareRobustCommand{\EFDGSL}
     {\ensuremath{\exists}\FDGSL}
2086 \DeclareRobustCommand{\UFDGSL}
     {\ensuremath{\forall}\FDGSL}
2089 % Alternating-Goal Strategy Logic
2090 \DeclareRobustCommandx{\AGSL}[3][1=, 2=, 3=]
      {\SL[#1][#2][ag\arglef{,}{#3}]}
2093 \DeclareRobustCommand{\EAGSL}
2094
     {\ensuremath{\exists}\AGSL}
2095 \DeclareRobustCommand{\UAGSL}
     {\ensuremath{\forall}\AGSL}
2097
2098 \DeclareRobustCommand{\FAGSL}
      {\{\text{txtname}\{F\}\}\setminus AGSL\}}
2101 \DeclareRobustCommand{\EFAGSL}
     {\ensuremath{\exists}\FAGSL}
2103 \DeclareRobustCommand{\UFAGSL}
     {\ensuremath{\forall}\FAGSL}
2104
2105
2106 % Extended-Goal Strategy Logic
2107 \DeclareRobustCommandx{\EGSL}[3][1=, 2=, 3=]
     {\SL[#1][#2][eg\arglef{,}{#3}]}
2109
2110 \DeclareRobustCommand{\EEGSL}
      {\ensuremath{\exists}\EGSL}
2112 \DeclareRobustCommand{\UEGSL}
2113
     {\ensuremath{\forall}\EGSL}
2114
2115 \DeclareRobustCommand{\FEGSL}
     {\{\text{txtname}\{F\}\}\setminus EGSL\}}
2116
2117
2118 \DeclareRobustCommand{\EFEGSL}
     {\ensuremath{\exists}\FEGSL}
2120 \DeclareRobustCommand{\UFEGSL}
2121
      {\ensuremath{\forall}\FEGSL}
2123 % Boolean-Goal Strategy Logic
2124 \DeclareRobustCommandx{\BGSL}[3][1=, 2=, 3=]
2125
     {\SL[#1][#2][bg\arglef{,}{#3}]}
2126
2127 \DeclareRobustCommand{\EBGSL}
2128 {\ensuremath{\exists}\BGSL}
2129 \DeclareRobustCommand{\UBGSL}
     {\ensuremath{\forall}\BGSL}
2132 \DeclareRobustCommand{\FBGSL}
     {{\txtname{F}}\BGSL}
2135 \DeclareRobustCommand{\EFBGSL}
2136 {\ensuremath{\exists}\FBGSL}
2137 \DeclareRobustCommand{\UFBGSL}
     {\ensuremath{\forall}\FBGSL}
2140 % Nested-Goal Strategy Logic
2141 \DeclareRobustCommandx{\NGSL}[3][1=, 2=, 3=]
      {\SL[#1][#2][ng\arglef{,}{#3}]}
2143
```

```
2144 \DeclareRobustCommand{\ENGSL}
                               {\ensuremath{\exists}\NGSL}
                       2146 \DeclareRobustCommand{\UNGSL}
                       2147 {\ensuremath{\forall}\NGSL}
                       2148
                       2149 \DeclareRobustCommand{\FNGSL}
                       2150 \quad \{\{\text{txtname}\{F\}\} \setminus \text{NGSL}\}
                       2151
                       2152 \DeclareRobustCommand{\EFNGSL}
                               {\ensuremath{\exists}\FNGSL}
                       2154 \DeclareRobustCommand{\UFNGSL}
                                {\ensuremath{\forall}\FNGSL}
                       2156
                       2157 % Undefined-Goal Strategy Logic
                       2158 \DeclareRobustCommandx{\XGSL}[3][1=, 2=, 3=]
                                {\SL[#1][#2][xg\arglef{,}{#3}]}
                       2160
                       2161 \DeclareRobustCommand{\EXGSL}
                                {\ensuremath{\exists}\XGSL}
                       2163 \DeclareRobustCommand{\UXGSL}
                                {\ensuremath{\forall}\XGSL}
                       2166 \DeclareRobustCommand{\FXGSL}
                                {{\txtname{F}}\XGSL}
                       2167
                       2168
                       2169 \DeclareRobustCommand{\EFXGSL}
                       2170 {\ensuremath{\exists}\FXGSL}
                       2171 \DeclareRobustCommand{\UFXGSL}
                              {\ensuremath{\forall}\FXGSL}
                       \BndSet, ...
                       2174 \mbox{ \newcommand{\bndsym}{\flat}}
                       2175 \newcommand{\bndset}{Bn}
                       2176 \cmdmthsetext{Bnd} [\bndset] [\bndsym]
                       2177 \cmdmthsymelm{idbnd}[\bndsym_{\text{id}}]
                       2178 \usrmth{bnd}{}{argfun}
             \psn
                       2179 \usrmth{psn}{}{argfun}
                       \nxt ...
                       2181 \usrmth{nxt}{}{argfun}
                       2182 \fi
                       2187 \ifaut@
                       \DFA, ... ...
                       2189 \verb|\cmdtxtoparname{DFA}\cmdtxtoparname{UFA}\cmdtxtoparname{AFA}|
                       2190
                       2193 \cmdtxtoparname{DFW}\cmdtxtoparname{AFW}\cmdtxtoparname{UFW}\cmdtxtoparname{AFW}
                       2194 \verb|\cmdtxtoparname{NWW}| cmdtxtoparname{WW}| cmdtxtoparname{AWW}| 
                       2195 \cmdtxtoparname{DBW}\cmdtxtoparname{MBW}\cmdtxtoparname{UBW}\cmdtxtoparname{ABW}
```

```
2197 \cmdtxtoparname{DPW}\cmdtxtoparname{MPW}\cmdtxtoparname{UPW}\cmdtxtoparname{APW}
                                                                     {\tt 2199 \cmdtxtoparname\{DSW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{ASW\}\cmdtxtoparname\{
                                                                      2200 \verb|\cmdtxtoparname{DMW}\cmdtxtoparname{MW}| cmdtxtoparname{AMW}| c
                           \GFG, ... ...
                                                                     2201 \cmdtxtoparname{GFG}
                                                                     2202
                                                                     2203 \cmdtxtoparname{PD}
                                                                      2204 \cmdtxtoparname{PN}
                                                                     2205
                                                                     2206 \cmdtxtoparname{LD}
                                                                      2207 \cmdtxtoparname{LN}
                                                                     \AutName, ...
                                                                     2209 \newcommand{\autname}{A}
                                                                     2210 \usrmthlatupp{Aut}{Name}{name}[\autname]
                                                                     2211 \newcommand{\autset}{Aut}
                                                                     2212 \cmdmthset{Aut}[\autset]
                               \WAutSet ...
                                                                     2213 \mbox{ \newcommand{\wautset}{WAut}}
                                                                     2214 \cmdmthset{WAut}[\wautset]
               \SymSet, ... ...
                                                                     2215 \newcommand{\symsym}{\sigma}
                                                                     2216 \newcommand{\symset}{\Sigma}
                                                                     2217 \cmdmthsetext{Sym}[\symset][\symsym]
               \SttSet, ... ...
                                                                     2218 \providecommand{\sttsym}{q}
                                                                     2219 \providecommand{\sttset}{Q}
                                                                     2220 \cmdmthsetext{Stt}[\sttset][\sttsym]
                                                                     2221 \cmdmthset{IStt}[\sttset_{I}]
                                                                      2222 \cmdmthsymelm{istt}[\sttsym_{I}]
                                                                     2223 \cmdmthset{FStt}[\sttset_{F}]
                                                                     2224 \cmdmthsymelm{fstt}[\sttsym_{F}]
\trnFun, \trnRel
                                                                     2225 \providecommand{\trnsym}{\delta}
                                                                      2226 \cmdmthfun{trn}[\trnsym]
                                                                      2227 \cmdmthrel{trn}[\trnsym]
                                                                      \WrdSet, ... ...
                                                                     2229 \newcommand{\wrdsym}{w}
                                                                     2230 \newcommand{\wrdset}{Wr}
                                                                     2231 \cmdmthsetext{Wrd}[\wrdset][\wrdsym]
                                           \Lang ...
                                                                     2232 \usrmth{Lang}{}{argfun}[L]
                                                                     \DTA, ... ...
                                                                     2234 \verb|\cmdtxtoparname{DTA}\cmdtxtoparname{UTA}\cmdtxtoparname{ATA}|
                                                                      2236 \verb|\cmdtxtoparname{NFT}| cmdtxtoparname{MFT}| cmdtxtoparname{MFT}|
                                                                      2237 \cmdtxtoparname{DWT}\cmdtxtoparname{AWT}\cmdtxtoparname{UWT}\cmdtxtoparname{AWT}
```

```
2238 \cmdtxtoparname{DBT}\cmdtxtoparname{ABT}\cmdtxtoparname{ABT}
                      2239 \verb|\cmdtxtoparname{DCT}\cmdtxtoparname{UCT}\cmdtxtoparname{ACT}| \\
                      2240 \verb|\cmdtxtoparname{DPT}\cmdtxtoparname{MPT}| cmdtxtoparname{APT}| 
                      2241 \verb|\cmdtxtoparname{DRT}\cmdtxtoparname{ART}| \\
                      2242 \verb|\cmdtxtoparname{UST}\cmdtxtoparname{AST}| \\
                      2243 \verb|\cmdtxtoparname{DMT}\cmdtxtoparname{MMT}\cmdtxtoparname{UMT}\cmdtxtoparname{AMT}|
                      \TAutSet
                      2245 \mbox{ } \mbox{TAut}
                      2246 \cmdmthset{TAut}[\tautset]
 \DirSet, ... ...
                     2247 \newcommand{\dirsym}{d}
                      2248 \newcommand{\dirset}{\Lambda}
                      2249 \cmdmthsetext{Dir}[\dirset][\dirsym]
                      \TreeSet, ... ...
                      2251 \mbox{ \newcommand{\treesym}{T}}
                      2252 \neq Tr
                      2253 \cmdmthsetext{Tree} [\treeset] [\treesym]
             \wot ...
                      2254 \usrmth{wot}{}{argfun}
                      2255 \fi
                      2260 \iffrm@
                      2261 %%...
                      2262 \fi
                      2267 \iffig@
                      2268 \RequirePackage{tikz}
                      2269 \usetikzlibrary{arrows, shapes, patterns, graphs, matrix}
                      2270 \tikzstyle{every node} =
                      2271 [draw = none, fill = none, black, thin]
                      2272 \tikzstyle{every edge} +=
                      2273 [black, thick]
                      2274 \tikzstyle{noall} =
                      2275 [draw = none, fill = none]
                      2276 \text{tikzstyle}\{\text{nodraw}\} =
                      2277 [draw = none, fill = white]
                      2278 \tikzstyle{nofill} =
                              [draw = black, fill = none]
                      2280 \ifwrpfig@
                             % Wrapfig Package
                      2282 \RequirePackage{wrapfig}
                      2283 \fi
```

```
2284 \fi
       2289 \iftab@
       2290 %%...
       2291 \fi
       2296 \ifalg@
       2297 \RequirePackage[ruled,vlined]{algorithm2e}
       2298 \setminus DontPrintSemicolon
       2299 \SetInd{0.25em}{0.5em}
       2300 \stlength{\algomargin}{1.25em}
 \Signature ...
       2301 \SetKw{Signature}{signature}
 \Macro, ... ...
       2302 \SetKwFor{Macro}{macro}{}}
       2303 \SetKwFor{Function}{function}{}}
       2304 \SetKwFor{Procedure}{procedure}{}{}
    \Let ...
       2305 \For{Let}{in}{}
\True, \False
       2306 \SetKw{True}{true}
       2307 \SetKw{False}{false}
 \From, ... ...
       2308 \SetKw{From}{from}
       2309 \SetKw{To}{to}
       2310 \SetKw{DownTo}{downto}
 \GoTo, ... ...
       2311 \SetKw{GoTo}{goto}
       2312 \SetKw{Break}{break}
       2313 \SetKw{Continue}{continue}
  \MIf, ... ...
       \nlr ...
       2315 \DeclareRobustCommand{\nlr}[1]
          {\addtocounter{AlgoLine}{1}%
          \nlset{\arabic{AlgoLine}-\addtocounter{AlgoLine}{#1}\arabic{AlgoLine}}}
       2318 \fi
       2320 \endinput
       2321 (/package)
```

## 2 Change History

v0.0	v0.20
General: First public release 1	General: New binary operators
v0.1	v0.21
General: Algorithm tricks 1	General: Refactoring of function macros 1
v0.10	v0.22
General: Small refinements 1	General: Few additions
v0.11	v0.23
General: Few additions and corrections 1	General: New 'Graphs' section and small
v0.12	improvements 1
General: New starred variants	v0.24
v0.13	General: Correction of fragile macros 1
General: Further starred variants 1	v0.3
v0.14	General: Few problems solved
General: Few additions and corrections 1	v0.4
v0.15	General: Refactoring, corrections, and
General: Refactoring of dtx sources 1	extensions
v0.16	v0.5
	General: Figure tricks
General: Small refinements and few additions 1	v0.6
v0.17	General: Small refinements
General: Few additions	v0.7
v0.18	General: Refinements, corrections, and
General: Few new starred variants	extensions
v0.19	v0.8
General: Additional starred variants 1	General: Few refinements and corrections 1
v0.2	v0.9
General: Changes in 'Auxiliary tricks' 1	General: Small addition to 'Algorithm tricks'

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\right 427, 451, 919, 942,	\SetQI 1076	\thestring 670, 671, 672, 673
	\SetQNI 1080	
946, 950, 954, 958, 962,	\SetQPI 1078	\Theta 1054
946, 950, 954, 958, 962, 966, 970, 974, 978, 982,	\SetQPI	\Theta
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010,	\SetQPI 1078	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121,	\SetQPI	\Theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	\Theta
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822 \Rightarrow	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086	\Theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822 \Rightarrow	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088	\Theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822 \Rightarrow 895, 897 \rightarrow 890, 1395 \rightarrow	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086 \setrx 1007	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightarrow in 1041, 1044   \rmfamily 373, 573   \Role 862	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066 \SetZI 1068	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 860	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 860   \rrbracket 919, 921	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066 \SetZI 1068	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 860   \rrbracket 919, 921   \rst 1032	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066 \SetZI 1068 \SetZNI 1072	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 862   \rote 919, 921   \rst 1032   \rVert 1115, 1117	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1088 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066 \SetZI 1068 \SetZNI 1072 \SetZPI 1070	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rVert 1016, 1018, 1109,	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1086 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066 \SetZI 1068 \SetZNI 1072 \SetZPI 1070 \sffamily 561 \Sigma 1207, 1208, 1511, 2216	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 862   \rote 919, 921   \rst 1032   \rVert 1115, 1117	\SetQPI	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rvert 1016, 1018, 1109, 1111, 1148, 1150, 1152	\SetQPI 1078 \setr 1005 \SetR, □ 1082 \SetRI 1084 \SetRNI 1086 \SetRPI 1086 \setrx 1007 \setx 991 \SetZ, □ 1066 \SetZI 1068 \SetZNI 1072 \SetZPI 1070 \sffamily 561 \Sigma 1207, 1208, 1511, 2216	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 862   \role 919, 921   \rst 1016, 1018, 1109, 1111, 1148, 1150, 1152   S	\SetQPI	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \text{Rightarrow} \tag{890, 1395} \text{rightarrow} \tag{373, 573} \text{Role} \tag{862} \text{role} \tag{862} \text{role} \tag{860} \text{rybracket} \tag{919, 921} \text{rst} \tag{1032} \text{rvert} \tag{1115, 1117} \text{rvert} \tag{1016, 1018, 1109, 1111, 1148, 1150, 1152} \text{S} \text{\$\text{S}} \text{S}	\SetQPI	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \text{Rightarrow} \tag{890}, 1395   \text{rightarrow} \tag{373}, 573   \text{Role} \tag{862}   \text{role} \tag{860}   \text{rrbracket} \tag{919}, 921   \text{rst} \tag{115}, 1117   \text{rvert} \tag{115}, 1117   \text{rvert} \tag{115}, 1118   \text{SATG,}_\( \tag{1241} \)	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,  2272, 2274, 2276, 2278 Time, \( \) 1559 \top 1383 \treeset 2252, 2253 \treeSet, \( \) 2251 \treesym 2251, 2253 \triangleq 885 \trn 929 \trnFun, \( \) \trnRel 1855, 2225 \trnsym 1855, 1856,  1857, 2225, 2226, 2227 \text{True, \( \) \False 2306 \text{Tt, \( \) \False 1383 \ttsym 1383, 1384
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rVert 1115, 1117   \rvert 1016, 1018, 1109, 1111, 1148, 1150, 1152   \rightarrow 1718   \SATG, 1241   \SaveDoubleAcute 1717	\SetQPI	\theta
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightharpoonup 1041, 1044   \rmfamily 373, 573   \Role 862   \role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rvert 1115, 1117   \rvert 1016, 1018, 1109, 1111, 1148, 1150, 1152    S \S 1718   \SATG, 1241   \SaveDoubleAcute 1716	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,  2272, 2274, 2276, 2278 \time, 1191 \tl, \PL, \PL, 1559 \top 1383 \treeset 2252, 2253 \treeSet, 2251 \treesym 2251, 2253 \triangleq 885 \trn 929 \trnFun, \trnRel 1855, 2225 \trnsym 1855, 1856,  1857, 2225, 2226, 2227 \true, \False 2306 \tr, \Pf 1383 \ttsym 1383, 1384 \tuple, \Lambda 968 \tupler 972
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822     Rightarrow	\SetQPI	\theta
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822     Rightarrow	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270, 2272, 2274, 2276, 2278 Time, \( \) 1191 \text{TL, \( \)PL, \( \) 1559 \top 1383 \treeset 2252, 2253 \treeSet, \( \) 2251 \treesym 2251, 2253 \triangleq 885 \trn 929 \trnFun, \( \) trnRel 1855, 2225 \trnsym 1855, 1856, 1857, 2225, 2226, 2227 \text{True, \( \)\False 225, 226, 2227 \text{True, \( \)\False 2306 \text{Tt, \( \)\False 1383 \ttsym 1383, 1384 \tuple, \( \) 964 \tupler 972 \tuplex 1980
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightarrow 373, 573   \Role 862   \role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rvert 1115, 1117   \rvert 1016, 1018, 1109, 1111, 1148, 1150, 1152     S \S 1718   \SATG, 1241   \SaveDoubleAcute 1717   \SavePilcrow 1716   \SaveSectionSymbol 1718   \schape 561, 573   \seqofcmd 179, 192, 196   \seqofgrklet 199, 523	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightarrow 373, 573   \Role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rvert 1115, 1117   \rvert 1016, 1018, 1109, 1111, 1148, 1150, 1152     S \S 1718   \SATG, 1241   \SaveDoubleAcute 1717   \SavePilcrow 1718   \SaveSectionSymbol 1718   \schape 561, 573   \seqofcmd 179, 192, 196   \seqofgrklet 199, 523   \seqofgrklow	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270, 2272, 2274, 2276, 2278 \text{Time, 1191} \text{TL, \PL, 1559} \top 1383 \treeset 2252, 2253 \treeSet, 2251 \treesym 2251, 2253 \triangleq 885 \trn 929 \trnFun, \trnRel 1855, 2225 \trnsym 1855, 1856, 1857, 2225, 2226, 2227 \text{True, \Ff 1383} \ttsym 1383, 1384 \tuple, 964 \tupler 972 \tuplex 1980 \tuplex 976 \tuplex 1980 \tuplex 980 \tuplex 1984 \tuplex 984 \txt 362
946, 950, 954, 958, 962, 966, 970, 974, 978, 982, 986, 994, 1002, 1010, 1016, 1109, 1115, 1121, 1127, 1150, 1636, 1822   \Rightarrow 895, 897   \rightarrow 890, 1395   \rightarrow 373, 573   \Role 862   \role 862   \role 860   \rrbracket 919, 921   \rst 1032   \rvert 1115, 1117   \rvert 1016, 1018, 1109, 1111, 1148, 1150, 1152     S \S 1718   \SATG, 1241   \SaveDoubleAcute 1717   \SavePilcrow 1716   \SaveSectionSymbol 1718   \schape 561, 573   \seqofcmd 179, 192, 196   \seqofgrklet 199, 523	\SetQPI	\theta 1054 \theta 1053 \thmtls@false 25 \thmtls@true 24 \tikzstyle 2270,

	<b>\</b>	
\txtabr, <u>547</u>	\UFEGPL 1986	\usrmthgrklet <u>522</u>
\txtarg <u>364</u>	\UFEGSL	\usrmthgrklow <u>518</u>
\txtcom,	\UFNGSL 2154	\usrmthgrkupp $\dots \qquad \underline{520}$
\txtdef,535	\UFOGPL 1918	\usrmthlatlet <u>516</u>
\txtgen@false 53, 56	\UFOGSL 2052	\usrmthlatlow <u>512</u>
\txtgen@true	\UFPL 1901	\usrmthlatupp <u>514</u> , 1219,
. 54, 67, 78, 84, 89, 94, 99	\UFSL 2035	1264, 1279, 1382, 1426,
\txtname 1375,	\UFXGPL 2020	1445, 1452, 1458, 1465,
1440, 1442, 1523, 1525,	\UFXGSL 2171	1471, 1479, 1481, 1483,
1529, 1531, 1535, 1537,	\ULH,_\UBH <u>1209</u>	1485, 1639, 1826, 2210
1541, 1543, 1547, 1549,	\ULTL 1707	\usrmthlet <u>528</u> , 670, 672
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1599, 1603, 1612, 1616,	\UNGSL 2146	\usrtxt
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1679, 1693, 1704, 1730,	\UOGSL 2044	546, 550, 552, 554, 556,
1734, 1745, 1749, 1760,	\upharpoonright 1033	558, 563, 565, 567, 569,
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2116, 2133, 2150, 2167	\USL 2027	\valset 1428, 1429
\txtname,	\usrmth 506,	\ValSet,
\txtoarg 366	513, 515, 517, 519, 521,	\valsym 1427, 1429
\txtoargcom 1162, 1178	523, 525, 527, 529, 594,	\varcmd 166,
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\txtoparcom 1180	609, 611, 613, 615, 620,	947, 950, 951, 954, 955,
\txtpar 368	622, 624, 626, 628, 633,	958, 959, 962, 963, 966,
\txtsty	635, 637, 639, 641, 646,	967, 970, 971, 974, 975,
363, 365, 367, 369, 371, <u>372</u>	648, 650, 652, 654, 659,	978, 979, 982, 983, 986, 987
\txtstyabr 548	661, 663, 665, 667, 678,	\varepsilon 1144
\txtstycom 573	680, 682, 684, 686, 691,	\varnothing 1023, 1038
\txtstydef 536	693, 695, 697, 699, 704,	\varpi 1286, 1861
\txtstyname 561	706, 708, 710, 712, 717,	\varset 1447, 1448
\txtsubsup $302, 304, 359$	719, 721, 723, 725, 747,	\varsig 1444, 1445
	749, 753, 759, 761, 763,	\VarSig, <sub>□</sub> <u>1444</u>
U	765, 767, 772, 774, 776,	\varsym 1446, 1448
\UAFMC 1682	778, 780, 786, 788, 790,	\vec <u>931</u>
\UAGPL 1961	792, 794, 799, 801, 803,	\verset 1221, 1222
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\UATL 1786 \UATLP 1801	1027, 1028, 1046, 1047,	\versym . 1220, 1222, 1223, 1224
\UATLS	1048, 1049, 1051, 1052,	\vert 990, 998
\UBF	1053, 1054, 1055, 1056, 1131, 1132, 1133, 1134,	\Viceversa
\UBGPL	1135, 1136, 1137, 1138,	
\UBGSL	1139, 1140, 1141, 1153,	\viz <u>838</u> \vs 837
\UCGPL 1927	1154, 1231, 1232, 1233,	(VB
\UCGSL 2061	1101, 1201, 1202, 1200,	
••••	1293, 1297, 1308, 1309,	${f W}$
\UCTL 1737	1293, 1297, 1308, 1309, 1310, 1311, 1312, 1313,	WATL 1778
\UCTL	1310, 1311, 1312, 1313,	
		\WATL 1778
\UCTLP 1752	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394,	\WATL
\UCTLP	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386,	\WATL
\UCTLP	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \wautset 2213, 2214
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978 \UEGSL 2112	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416, 1417, 1418, 1419, 1449,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759 \wghset 1359, 1360
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978 \UEGSL 2112 \UFAGPL 1969 \UFAGSL 2103 \UFBGPL 2003	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416, 1417, 1418, 1419, 1449, 1450, 1456, 1462, 1463, 1469, 1475, 1476, 1512, 1514, 1622, 1623, 1624,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759 \wghset 1359, 1360 \WghSet,⊔\wghFun 1358
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978 \UEGSL 2112 \UFAGPL 1969 \UFAGSL 2103 \UFBGPL 2003 \UFBGSL 2137	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416, 1417, 1418, 1419, 1449, 1450, 1456, 1462, 1463, 1469, 1475, 1476, 1512, 1514, 1622, 1623, 1624, 1652, 1710, 1711, 1712,	\WATL 1778 \WATLP 1793 \WATLP 1793 \WATLS 1808 \WAutSet 2213 \wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759 \wghset 1359, 1360 \WghSet, □\wghFun 1358, 1360
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978 \UEGSL 2112 \UFAGPL 1969 \UFAGSL 2103 \UFBGPL 2003 \UFBGSL 2137 \UFCGPL 1935	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416, 1417, 1418, 1419, 1449, 1450, 1456, 1462, 1463, 1469, 1475, 1476, 1512, 1514, 1622, 1623, 1624, 1652, 1710, 1711, 1712, 1713, 1714, 1715, 1716,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \Wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759 \wghset 1359, 1360 \WghSet, \u\wghFun 1358, 1360 \WH 1203
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978 \UEGSL 2112 \UFAGPL 1969 \UFAGSL 2103 \UFBGPL 2003 \UFBGSL 2137 \UFCGPL 1935 \UFCGSL 2069	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416, 1417, 1418, 1419, 1449, 1450, 1450, 1456, 1462, 1463, 1469, 1475, 1476, 1512, 1514, 1622, 1623, 1624, 1652, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1770,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759 \wghset 1359, 1360 \WghSet,_\wghFun 1358, 1360 \WghSym 1358, 1360 \WH 1203 \widehat 928
\UCTLP 1752 \UCTLS 1767 \UDGPL 1944 \UDGSL 2078 \UEGPL 1978 \UEGSL 2112 \UFAGPL 1969 \UFAGSL 2103 \UFBGPL 2003 \UFBGSL 2137 \UFCGPL 1935	1310, 1311, 1312, 1313, 1314, 1315, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1416, 1417, 1418, 1419, 1449, 1450, 1456, 1462, 1463, 1469, 1475, 1476, 1512, 1514, 1622, 1623, 1624, 1652, 1710, 1711, 1712, 1713, 1714, 1715, 1716,	\WATL 1778 \WATLP 1793 \WATLS 1808 \WAUTSet 2213 \Wautset 2213, 2214 \WCTL 1729 \WCTLP 1744 \WCTLS 1759 \wghset 1359, 1360 \WghSet, \u\wghFun 1358, 1360 \WH 1203

\winset 1280, 1281	\WrdSet, <u>2229</u>	$\mathbf{X}$
\Wlogx <u>874</u>	\wrdsym 2229, 2231	\X,
\wlogx <u>871</u>	\wrlset 1641, 1642	\XGPL 2007, 2011, 2013, 2016
\WMPL 1598	\WrlSet, <u>1640</u>	, , , ,
\WMSO 1542	\wrlsym 1640, 1642, 1643	\XGSL 2158, 2162, 2164, 2167
\WMSOL 1540	\wrpfig@false 116	\xi 1305, 1427, 1858
	\wrpfig@true 115	\xspace 302, 304
\wot <u>2254</u>	\wrt <u>870</u>	·
\wp 1413	\WSO 1524	
\WPL 1586	\WSOL 1522	$\mathbf{Y}$
\wrdset 2230, 2231	\WTL 1563	\Y, <u>1715</u>