

fmocdmac — FM's OCD L^AT_EX Macro*

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Abstract

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

1 Implementation & Usage

```
1 <*package>
2
3 \RequirePackage{etoolbox}
4
5 \RequirePackage{xargs}
6 \RequirePackage{xspace}
7 \RequirePackage{stringstrings}
8
9 \RequirePackage{amsmath}
10 \RequirePackage{amssymb}
11 \interdisplaylinepenalty=2500
12
13
14 \PackageOptions{
15   %% Text macro generation
16   \newif\iftxtgen@ \txtgen@false
17   \DeclareOption{txtgen}{\txtgen@true}
18   \DeclareOption{nottxtgen}
19   {\txtgen@false\text@false\com@false\gam@false\log@false\aut@false}
20
21   %% Math macro generation
22   \newif\ifmthgen@ \mthgen@false
23   \DeclareOption{mthgen}{\mthgen@true}
24   \DeclareOption{nomthgen}
25   {\mthgen@false\math@false\gam@false\log@false\aut@false}
26
27   %% Elementary macros for text
28   \newif\iftext@ \text@false
29   \DeclareOption{text}{\text@true\txtgen@true}
30   \DeclareOption{nottext}{\text@false}
31
32   %% Elementary macros for math
33   \newif\ifmath@ \math@false
34   \DeclareOption{math}{\math@true\mthgen@true}
35   \DeclareOption{nomath}{\math@false}
36
37   %% Macros for computational-complexity classes
```

*This document describes version v0.2 of the fmocdmac package, last revised 2021/02/03.

```

37 \newif\ifcom@ \com@false
38 \DeclareOption{com}{\com@true\txtgen@true}
39 \DeclareOption{nocom}{\com@false}
40
41 %% Macros for games
42 \newif\ifgam@ \gam@false
43 \DeclareOption{gam}{\gam@true\txtgen@true\mthgen@true}
44 \DeclareOption{nogam}{\gam@false}
45
46 %% Macros for logics
47 \newif\iflog@ \log@false
48 \DeclareOption{log}{\log@true\txtgen@true\mthgen@true}
49 \DeclareOption{nolog}{\log@false}
50
51 %% Macros for automata
52 \newif\ifaut@ \aut@false
53 \DeclareOption{aut}{\aut@true\txtgen@true\mthgen@true}
54 \DeclareOption{noaut}{\aut@false}
55
56 %% Format-related tricks
57 \newif\iffrm@ \frm@false
58 \DeclareOption{frm}{\frm@true}
59 \DeclareOption{nofrm}{\frm@false}
60
61 %% Figure-related tricks
62 \newif\iffig@ \fig@false
63 \DeclareOption{fig}{\fig@true}
64 \DeclareOption{nofig}{\fig@false}
65
66 %% Table-related tricks
67 \newif\iftab@ \tab@false
68 \DeclareOption{tab}{\tab@true}
69 \DeclareOption{notab}{\tab@false}
70
71 %% Algorithm-related tricks
72 \newif\ifalg@ \alg@false
73 \DeclareOption{alg}{\alg@true}
74 \DeclareOption{noalg}{\alg@false}
75
76 %% Auxiliary tricks
77 \newif\ifaux@ \aux@false
78 \DeclareOption{aux}{\aux@true}
79 \DeclareOption{noaux}{\aux@false}
80
81 %% ...
82
83 %% Enumeration tools
84 \newif\ifenmtls@ \enmtls@true
85 \DeclareOption{noenmtls}{\enmtls@false}
86
87 %% Theorem tools
88 \newif\ifthmtls@ \thmtls@true
89 \DeclareOption{nothmtls}{\thmtls@false}
90
91 %% Hyper reference
92 \newif\ifhympref@ \hympref@true
93 \DeclareOption{nohympref}{\hympref@false}
94
95 %% ...
96
97 %% Camera-ready version
98 \newif\ifcrv@ \crv@false
99 \DeclareOption{crv}{\crv@true}

```

```

100
101 %% Change bars
102 \newif\ifchgbar@ \chgbar@false
103 \DeclareOption{chgbar}{\chgbar@true}
104
105 %% Line numbers
106 \newif\iflinnum@ \linnum@false
107 \DeclareOption{linnum}{\linnum@true}
108

  Option-processing code:
109
110 \DeclareOption*{\PackageWarning{fmodcmac}{Unknown~\CurrentOption}}%
111
112 \ExecuteOptions{txtgen,mthgen,text,math,com,gam,log,aut,aux}%
113
114 \ProcessOptions\relax%
115
116 \ifcsdef{if@twocolumn}{\newif\if@twocolumn}
117

118 %*****%
119 %** Auxiliary Font Declarations *****%
120 %*****%

\mathbbbo Bbo Math Font: ... to do!
121 \ifdef{\mathbbbo}{\DeclareMathAlphabet{\mathbbbo}{U}{bbold}{m}{n}}

\matheus Eus Math Font: ... to do!
122 \ifdef{\matheus}{\DeclareMathAlphabet{\matheus}{U}{eus}{m}{n}}

\mathpzc Pzc Math Font: ... to do!
123 \ifdef{\mathpzc}{\DeclareMathAlphabet{\mathpzc}{T1}{pzc}{m}{it}}

\mathscr Scr Math Font: ... to do!
124 \ifdef{\mathscr}{\DeclareMathAlphabet{\mathscr}{U}{rsfs}{m}{n}}

125 %*****%
126 %*****%
127 %** Auxiliary Alphabet Letters *****%
128 %*****%

\omicron Auxiliary Greek lowercase letter: ... to do!
129 \csdef{omicron}{o}

\Alpha, ... Auxiliary Greek uppercase letters: ... to do!
130 \csdef{Alpha}{A} \csdef{Beta}{B} \csdef{Epsilon}{E} \csdef{varEpsilon}{E}
131 \csdef{Zeta}{Z} \csdef{Eta}{H} \csdef{Iota}{I} \csdef{Kappa}{K}
132 \csdef{varKappa}{K} \csdef{Mu}{M} \csdef{Nu}{N} \csdef{Omicron}{O}
133 \csdef{Rho}{P} \csdef{varRho}{P} \csdef{Tau}{T} \csdef{Chi}{X}

134 %*****%
135 %*****%
136 %** Tools *****%
137 %*****%

\empchk Emptiness check: \empchk{⟨A⟩}{⟨B⟩} evaluates to the empty string, if Argument ⟨A⟩ is empty,  

and to Argument ⟨B⟩, otherwise.


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


138 \newcommand{\empchk}[2]
139 {\if#1&\else#2\fi}

```

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

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

```

140 \newcommand{\defval}[2]
141   {\if&#1&#2\else#1\fi}

142 %*****%
```

\arglef **Left extension:** `\arglef{<A>}{}` 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”

```

143 \newcommand{\arglef}[2]
144   {\empchk{#2}{#1\allowbreak#2}}
```

\argrig **Right extension:** `\argrig{<A>}{}` 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”

```

145 \newcommand{\argrig}[2]
146   {\empchk{#1}{#1\allowbreak#2}}
```

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

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

```

147 \newcommand{\argmid}[3]
148   {\empchk{#2}{#1\allowbreak#2\allowbreak#3}}
```

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

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

```

149 \newcommand{\argsep}[3]
150   {\if&#1&#3\else#1\allowbreak\arglef{#2}{#3}\fi}

151 %*****%
```

\varcmd **Variadic commands:** `\varcmd{<A>}{}{<C>}{<D>}{<E>}{<F>} ... to do!`

```

152 \newcommand{\varcmd}[6]
153   {\expandafter\newcommand\csname gobble#1arg\endcsname[2]
154     {\csname check#1arg\endcsname{\argsep{##1}{#4}{##2}}}%
155     \expandafter\newcommand\csname check#1arg\endcsname[1]
156       {\csname @ifnextchar\endcsname%
157         \bgroup\csname gobble#1arg\endcsname{##1}{#2{##1#5#6}}}%
158     \expandafter\newcommand\csname#1\endcsname[1]
159       {\csname check#1arg\endcsname{#3##1}}}
```

```

160 %*****%
```

\seqoftag **Sequence of tags:** `\seqoftag{<A>}{}{<C>} ... to do!`

```

161 \newcommand{\seqoftag}[3]
162   {\@for\itr:={#1}\do%
163     {\expandafter\csedef\itr#2}%
164     {\noexpand\csname #3\endcsname{\itr}}}
```

```

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

169 %%*****%

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

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

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

176 %%*****%

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

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

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

187 %%*****%

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

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

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

194 %%*****%
195 %%*****%
196 %** Text Meta Commands *****%
197 %%*****%

\newtxt ... to do!


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

```

```

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

\newtxtsty ... to do!
  • \newtxtsty{\rmfamily}{Name}[sub][sup][Ext] = “NamesubExt”
  • \newtxtsty{\rmfamily}{\sffamily}{Name}[sub][sup][Ext] = “NamesubExt”
  • \newtxtsty{\rmfamily}{\ttfamily}{Name}[sub][sup][Ext] = “NamesubExt”
200 \newcommandx{\newtxtsty}[2][2=]
201   {\newtxt[\defval{#2}{#1}]}

\newtxtarg ... to do!
  • \newtxtarg{\rmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “NamesubExt1(Arg)Ext2”
  • \newtxtarg{\sffamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “NamesubExt1(Arg)Ext2”
  • \newtxtarg{\ttfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “NamesubExt1(Arg)Ext2”
202 \newcommandx{\newtxtarg}[7][1=, 3=, 4=, 5=, 7=]
203   {\newtxt{#1}{#2}{#3}{#4}{#5\argmid{ }{#6}{}}{#7}}

\newtxtargsty ... to do!
  • \newtxtargsty{\rmfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “NamesubExt1(Arg)Ext2”
  • \newtxtargsty{\rmfamily}{\sffamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “NamesubExt1(Arg)Ext2”
  • \newtxtargsty{\rmfamily}{\ttfamily}{Name}[sub][sup][Ext1]{Arg}[Ext2] = “NamesubExt1(Arg)Ext2”
204 \newcommandx{\newtxtargsty}[2][2=]
205   {\newtxtarg[\defval{#2}{#1}]}

\newtxttoarg ... to do!
  • \newtxttoarg{\rmfamily}{Name}[sub][sup][Arg] = “Namesub(Arg)”
  • \newtxttoarg{\sffamily}{Name}[sub][sup][Arg] = “Namesub(Arg)”
  • \newtxttoarg{\ttfamily}{Name}[sub][sup][Arg] = “Namesub(Arg)”
206 \newcommandx{\newtxttoarg}[5][1=, 3=, 4=, 5=]
207   {\newtxtarg{#1}{#2}{#3}{#4}[] {#5}[] }

\newtxttoargsty ... to do!
  • \newtxttoargsty{\rmfamily}{Name}[sub][sup][Arg] = “Namesub(Arg)”
  • \newtxttoargsty{\rmfamily}{\sffamily}{Name}[sub][sup][Arg] = “Namesub(Arg)”
  • \newtxttoargsty{\rmfamily}{\ttfamily}{Name}[sub][sup][Arg] = “Namesub(Arg)”
208 \newcommandx{\newtxttoargsty}[2][2=]
209   {\newtxttoarg[\defval{#2}{#1}]}

\newtxtpar ... to do!
  • \newtxtpar{\rmfamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = “NamesubExt1[Par]Ext2”
  • \newtxtpar{\sffamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = “NamesubExt1[Par]Ext2”
  • \newtxtpar{\ttfamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = “NamesubExt1[Par]Ext2”
210 \newcommandx{\newtxtpar}[7][1=, 3=, 4=, 5=, 7=]
211   {\newtxt{#1}{#2}{#3}{#4}{#5\argmid{ }{#6}{}}{#7}}

\newtxtparsty ... to do!
  • \newtxtparsty{\rmfamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = “NamesubExt1[Par]Ext2”
  • \newtxtparsty{\rmfamily}{\sffamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = “NamesubExt1[Par]Ext2”
  • \newtxtparsty{\rmfamily}{\ttfamily}{Name}[sub][sup][Ext1]{Par}[Ext2] = “NamesubExt1[Par]Ext2”
212 \newcommandx{\newtxtparsty}[2][2=]
213   {\newtxtpar[\defval{#2}{#1}]}

\newtxtopar ... to do!
  • \newtxtopar{\rmfamily}{Name}[sub][sup][Par] = “Namesub[Par]”
  • \newtxtopar{\sffamily}{Name}[sub][sup][Par] = “Namesub[Par]”

```

```

    • \newtxtopar[\ttfamily]{Name}[sub][sup][Par] = "Namesub[Par]"
214 \newcommandx{\newtxtopar}[5][1=, 3=, 4=, 5=]
215   {\newtxtpar[#1]{#2}[#3][#4][#5]}

\newtxtoparsty ... to do!
    • \newtxtoparsty{\rmfamily}{Name}[sub][sup][Par] = "Namesub[Par]"
    • \newtxtoparsty{\rmfamily}{\sfamily}{Name}[sub][sup][Par] = "Namesub[Par]"
    • \newtxtoparsty{\rmfamily}{\ttfamily}{Name}[sub][sup][Par] = "Namesub[Par]"
216 \newcommandx{\newtxtoparsty}[2][2=]
217   {\newtxtopar[\defval{#2}{#1}]}

\txtsubsup ... to do!
    • \txtsubsup{sub}{ } = "sub"; \txtsubsup{ }{sup} = "sup"; \txtsubsup{sub}{sup} = "subsup"
    • \txtsubsup{\sfamily}{Aa}{Bb} = "AaBb"
    • \txtsubsup{\ttfamily}{Aa}{Bb} = "AaBb"
218 \newcommand{\txtsubsup}[3]{}
219   {\ensuremath{\empchk{#2}_{\text{#1#2}}}\empchk{#3}{\text{#1#3}}}}

220 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

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

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

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

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

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

```

```

\txtsty ... to do!
231 \newcommand{\txtsty}
232 {\mdseries\upshape\rmfamily}

233 %%*****%

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

\cmdtxtarg ... to do!
• \cmdtxtarg{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtargNewCmd{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUPSUBEXT1(ARG)EXT2
236 \newcommand{\cmdtxtarg}[1]
237 {\csdef{txtarg#1}{\newtxtargsty{\csname txtsty#1\endcsname}}}

\cmdtxttoarg ... to do!
• \cmdtxttoarg{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txttoargNewCmd{Name}[sub][sup][Arg] = NAMESUPSUB(ARG)
238 \newcommand{\cmdtxttoarg}[1]
239 {\csdef{txttoarg#1}{\newtxttoargsty{\csname txtsty#1\endcsname}}}

\cmdtxtpar ... to do!
• \cmdtxtpar{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtparNewCmd{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUPSUBEXT1[PAR]EXT2
240 \newcommand{\cmdtxtpar}[1]
241 {\csdef{txtpar#1}{\newtxtparsty{\csname txtsty#1\endcsname}}}

\cmdtxtopar ... to do!
• \cmdtxtopar{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtoparNewCmd{Name}[sub][sup][Par] = NAMESUPSUB[PAR]
242 \newcommand{\cmdtxtopar}[1]
243 {\csdef{txtopar#1}{\newtxtoparsty{\csname txtsty#1\endcsname}}}

\cmdtxtall ... to do!
• \cmdtxtall{NewCmd}; \newcommand{txtstyNewCmd}{\scshape\ttfamily};
  \txtNewCmd{Name}[sub][sup][Ext] = NAMESUPSUBEXT
  \txtargNewCmd{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUPSUBEXT1(ARG)EXT2
  \txttoargNewCmd{Name}[sub][sup][Arg] = NAMESUPSUB(ARG)
  \txtparNewCmd{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUPSUBEXT1[PAR]EXT2
  \txtoparNewCmd{Name}[sub][sup][Par] = NAMESUPSUB[PAR]
244 \newcommand{\cmdtxtall}[1]
245 {\cmdtxt{#1}\cmdtxtarg{#1}\cmdtxttoarg{#1}\cmdtxtpar{#1}\cmdtxtopar{#1}}

246 %%*****%

\usrtxt ... to do!
• \usrtxt{cmdName}{Suf}{-}; \cmdNameSuf = cmdName
  \usrtxt{cmdName}{Suf}{arg}; \cmdNameSuf{Arg} = cmdName(Arg)
  \usrtxt{cmdName}{Suf}{par}; \cmdNameSuf{Par} = cmdName[Par]
• \usrtxt{cmdName}{Suf}{-}[newName]; \cmdNameSuf = newName
  \usrtxt{cmdName}{Suf}{arg}[newName]; \cmdNameSuf{Arg} = newName(Arg)
  \usrtxt{cmdName}{Suf}{par}[newName]; \cmdNameSuf{Par} = newName[Par]
247 \newcommandx{\usrtxt}[4][4=]
248 {\csdef{#1#2}{\csname txt#3\endcsname{\defval{#4}{#1}}}}

249 %%*****%

```



```

250 %*****%
251 %** Math Meta Commands *****%
252 %*****%

```

`\newmth` ... to do!

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

```

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

```

`\newmthsty` ... to do!

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

```

255 \newcommandx{\newmthsty}[2][2=]
256   {\newmth[\defval{#2}{#1}]}

```

`\newmtharg` ... to do!

- `\newmtharg[mathrm]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"`
- `\newmtharg[mathsf]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"`
- `\newmtharg[mathtt]{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"`

```

257 \newcommandx{\newmtharg}[7][1=, 3=, 4=, 5=, 7=]
258   {\newmth{#1}{#2}{#3}{#4}{#5}\argmid{\!\left{}{#6}{\right)}\arglef{\!}{#7}}}

```

`\newmthargsty` ... to do!

- `\newmthargsty{mathrm}{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"`
- `\newmthargsty{mathsf}{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"`
- `\newmthargsty{mathtt}{Name}[sub][sup][Ext1]{Arg}[Ext2] = "NamesubExt1(Arg)Ext2"`

```

259 \newcommandx{\newmthargsty}[2][2=]
260   {\newmtharg[\defval{#2}{#1}]}

```

`\newmthoarg` ... to do!

- `\newmthoarg[mathrm]{Name}[sub][sup][Arg] = "Namesub(Arg)"`
- `\newmthoarg[mathsf]{Name}[sub][sup][Arg] = "Namesub(Arg)"`
- `\newmthoarg[mathtt]{Name}[sub][sup][Arg] = "Namesub(Arg)"`

```

261 \newcommandx{\newmthoarg}[5][1=, 3=, 4=, 5=]
262   {\newmtharg{#1}{#2}{#3}{#4}[]{}{#5}[]{}{}}

```

`\newmthoargsty` ... to do!

- `\newmthoargsty{mathrm}{Name}[sub][sup][Arg] = "Namesub(Arg)"`
- `\newmthoargsty{mathsf}{Name}[sub][sup][Arg] = "Namesub(Arg)"`
- `\newmthoargsty{mathtt}{Name}[sub][sup][Arg] = "Namesub(Arg)"`

```

263 \newcommandx{\newmthoargsty}[2][2=]
264   {\newmthoarg[\defval{#2}{#1}]}

```

`\newmthpar` ... to do!

- `\newmthpar[mathrm]{Name}[sub][sup][Ext1]{Par}[Ext2] = "NamesubExt1[Par]Ext2"`
- `\newmthpar[mathsf]{Name}[sub][sup][Ext1]{Par}[Ext2] = "NamesubExt1[Par]Ext2"`
- `\newmthpar[mathtt]{Name}[sub][sup][Ext1]{Par}[Ext2] = "NamesubExt1[Par]Ext2"`

```

265 \newcommandx{\newmthpar}[7][1=, 3=, 4=, 5=, 7=]
266   {\newmth{#1}{#2}{#3}{#4}{#5}\argmid{\!\left[]{}{#6}{\right)}\arglef{\!}{#7}}}

```

`\newmthparsty` ... to do!

- `\newmthparsty{mathrm}{Name}[sub][sup][Ext1]{Par}[Ext2] = "NamesubExt1[Par]Ext2"`

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

```

267 \newcommandx{\newmthparsty}[2][2=]
268   {\newmthpar[\defval{#2}{#1}]}

\newmthpar ... to do!


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


269 \newcommandx{\newmthpar}[5][1=, 3=, 4=, 5=]
270   {\newmthpar[#1]{#2}{#3}{#4}[] {#5}[] }

\newmthparsty ... to do!


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


271 \newcommandx{\newmthparsty}[2][2=]
272   {\newmthpar[\defval{#2}{#1}]}

\mthsubsup ... to do!
273 \newcommand{\mthsubsup}[2]
274   {\empchk{#1}{_}{#1}}\empchk{#2}{^}{#2}}

275 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\mth ... to do!


- $\backslash\mathrm{mth}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \text{“Name}_{sub}^{sup}Ext\text{”}$
- $\backslash\mathrm{mth}[\mathrm{mathbf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \text{“Name}_{sub}^{sup}Ext\text{”}$
- $\backslash\mathrm{mth}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext}] = \text{“Name}_{sub}^{sup}Ext\text{”}$


276 \newcommand{\mth}
277   {\newmthsty{\mthsty}}

\mtharg ... to do!


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


278 \newcommand{\mtharg}
279   {\newmthargsty{\mthsty}}

\mthoarg ... to do!


- $\backslash\mathrm{mthoarg}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}] = \text{“Name}_{sub}^{sup}(Arg)\text{”}$
- $\backslash\mathrm{mthoarg}[\mathrm{mathbf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}] = \text{“Name}_{sub}^{sup}(Arg)\text{”}$
- $\backslash\mathrm{mthoarg}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Arg}] = \text{“Name}_{sub}^{sup}(Arg)\text{”}$


280 \newcommand{\mthoarg}
281   {\newmthoargsty{\mthsty}}

\mthpar ... to do!


- $\backslash\mathrm{mthpar}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}\}[\mathrm{Ext2}] = \text{“Name}_{sub}^{sup}Ext1[Par]Ext2\text{”}$
- $\backslash\mathrm{mthpar}[\mathrm{mathbf}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}\}[\mathrm{Ext2}] = \text{“Name}_{sub}^{sup}Ext1[Par]Ext2\text{”}$
- $\backslash\mathrm{mthpar}[\mathrm{mathtt}]\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Ext1}]\{\mathrm{Par}\}[\mathrm{Ext2}] = \text{“Name}_{sub}^{sup}Ext1[Par]Ext2\text{”}$


282 \newcommand{\mthpar}
283   {\newmthparsty{\mthsty}}

\mthopar ... to do!


- $\backslash\mathrm{mthopar}\{\mathrm{Name}\}[\mathrm{sub}][\mathrm{sup}][\mathrm{Par}] = \text{“Name}_{sub}^{sup}[Par]\text{”}$

```

- $\backslash\mathop{\mathrm{par}}\nolimits[\mathbf{bf}]{\mathrm{Name}}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}] = \text{“Name}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}]”$
- $\backslash\mathop{\mathrm{par}}\nolimits[\mathtt{tt}]{\mathrm{Name}}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}] = \text{“Name}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}]”$

```

284 \newcommand{\mathopar}
285   {\newmathoparsty{\mthsty}}

\mthsty ... to do!

286 \newcommand{\mthsty}
287   {}

288 %%*****%
```

```

\cmdmth ... to do!



- $\backslash\mathrm{cmdmth}\{\mathrm{NewCmd}\}; \backslash\mathrm{newcommand}\{\mathrm{mthstyNewCmd}\}\{\mathtt{tt}\};$   

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


289 \newcommand{\cmdmth}[1]
290   {\csdef{mth#1}\newmthsty{mthsty#1}}

\cmdmtharg ... to do!



- $\backslash\mathrm{cmdmtharg}\{\mathrm{NewCmd}\}; \backslash\mathrm{newcommand}\{\mathrm{mthstyNewCmd}\}\{\mathtt{tt}\};$   

 $\backslash\mathrm{mthargNewCmd}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}][\mathrm{Arg}][\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg})\mathrm{Ext2}$


291 \newcommand{\cmdmtharg}[1]
292   {\csdef{mtharg#1}\newmthargsty{mthsty#1}}

\cmdmthoarg ... to do!



- $\backslash\mathrm{cmdmthoarg}\{\mathrm{NewCmd}\}; \backslash\mathrm{newcommand}\{\mathrm{mthstyNewCmd}\}\{\mathtt{tt}\};$   

 $\backslash\mathrm{mthoargNewCmd}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Arg}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}(\mathrm{Arg})$


293 \newcommand{\cmdmthoarg}[1]
294   {\csdef{mthoarg#1}\newmthoargsty{mthsty#1}}

\cmdmthpar ... to do!



- $\backslash\mathrm{cmdmthpar}\{\mathrm{NewCmd}\}; \backslash\mathrm{newcommand}\{\mathrm{mthstyNewCmd}\}\{\mathtt{tt}\};$   

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


295 \newcommand{\cmdmthpar}[1]
296   {\csdef{mthpar#1}\newmthparsty{mthsty#1}}

\cmdmthopar ... to do!



- $\backslash\mathrm{cmdmthopar}\{\mathrm{NewCmd}\}; \backslash\mathrm{newcommand}\{\mathrm{mthstyNewCmd}\}\{\mathtt{tt}\};$   

 $\backslash\mathrm{mthoparNewCmd}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}]$


297 \newcommand{\cmdmthopar}[1]
298   {\csdef{mthopar#1}\newmthoparsty{mthsty#1}}

\cmdmthall ... to do!



- $\backslash\mathrm{cmdmthall}\{\mathrm{NewCmd}\}; \backslash\mathrm{newcommand}\{\mathrm{mthstyNewCmd}\}\{\mathtt{tt}\};$   

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

 $\backslash\mathrm{mthargNewCmd}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Ext1}][\mathrm{Arg}][\mathrm{Ext2}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}\mathrm{Ext1}(\mathrm{Arg})\mathrm{Ext2}$   

 $\backslash\mathrm{mthoargNewCmd}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Arg}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}(\mathrm{Arg})$   

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

 $\backslash\mathrm{mthoparNewCmd}\{\mathrm{Name}\}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}] = \mathrm{Name}_{\mathrm{sub}}^{\mathrm{sup}}[\mathrm{Par}]$


299 \newcommand{\cmdmthall}[1]
300   {\cmdmth{#1}\cmdmtharg{#1}\cmdmthoarg{#1}\cmdmthpar{#1}\cmdmthopar{#1}}

301 %%*****%
```

```

\usrmth ... to do!



- $\backslash\mathrm{usrmth}\{\mathrm{cmdName}\}\{\mathrm{Suf}\}\{\}; \backslash\mathrm{cmdNameSuf} = \mathrm{cmdName}$   

 $\backslash\mathrm{usrmth}\{\mathrm{cmdName}\}\{\mathrm{Suf}\}\{\mathrm{arg}\}; \backslash\mathrm{cmdNameSuf}\{\mathrm{Arg}\} = \mathrm{cmdName}(\mathrm{Arg})$   

 $\backslash\mathrm{usrmth}\{\mathrm{cmdName}\}\{\mathrm{Suf}\}\{\mathrm{par}\}; \backslash\mathrm{cmdNameSuf}\{\mathrm{Par}\} = \mathrm{cmdName}[\mathrm{Par}]$
- $\backslash\mathrm{usrmth}\{\mathrm{cmdName}\}\{\mathrm{Suf}\}\{\}\{\mathrm{newName}\}; \backslash\mathrm{cmdNameSuf} = \mathrm{newName}$   

 $\backslash\mathrm{usrmth}\{\mathrm{cmdName}\}\{\mathrm{Suf}\}\{\mathrm{arg}\}\{\mathrm{newName}\}; \backslash\mathrm{cmdNameSuf}\{\mathrm{Arg}\} = \mathrm{newName}(\mathrm{Arg})$   

 $\backslash\mathrm{usrmth}\{\mathrm{cmdName}\}\{\mathrm{Suf}\}\{\mathrm{par}\}\{\mathrm{newName}\}; \backslash\mathrm{cmdNameSuf}\{\mathrm{Par}\} = \mathrm{newName}[\mathrm{Par}]$

```

```

302 \newcommandx{\usrmth}[4][4=]
303   {\csdef{#1#2}{\csname mth#3\endcsname{\defval{#4}{#1}}}}

304 %%*****%

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

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

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

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

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

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

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

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

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

323 %%*****%
324 %%*****%
325 %%** Text Macro Generators *****%
326 %%*****%
327 \iftxtgen@

\txtdf, ... ... to do!


- \txtdf{Name}[sub][sup][Ext] =  $Name_{\text{sub}}^{\text{sup}}Ext$
- \txtargdf{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $Name_{\text{sub}}^{\text{sup}}Ext1(Arg)Ext2$
- \txtpardef{Name}[sub][sup][Ext1]{Par}[Ext2] =  $Name_{\text{sub}}^{\text{sup}}Ext1[Par]Ext2$


328 %% Style for Definitions
329 \cmdtxtall{def}\newcommand{\txtstydef}{\bfseries\em}

\cmdtxtdef ... to do!


- \cmdtxtdef{cmdName};
      \cmdName[sub][sub][ext] =  $cmdName_{\text{sub}}^{\text{sub}}ext$
- \cmdtxtdef{cmdName}[newName];
      \cmdName[sub][sub][ext] =  $newName_{\text{sub}}^{\text{sub}}ext$

```

```

330 \newcommandx{\cmdtxtdef}[2][2=]
331   {\usrtxt{#1}{\def}{#2}}

\cmdtxtargdef ... to do!
  • \cmdtxtargdef{cmdName};
    \cmdName[sub][sub][ext1]{arg}[ext2] =  $cmdName_{sub}^{sub}ext1(arg)ext2$ 
  • \cmdtxtargdef{cmdName}[newName];
    \cmdName[sub][sub][ext1]{arg}[ext2] =  $newName_{sub}^{sub}ext1(arg)ext2$ 
332 \newcommandx{\cmdtxtargdef}[2][2=]
333   {\usrtxt{#1}{\argdef}{#2}}

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

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

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

\txtabr, ... ... to do!
  • \txtabr{Name}[sub][sup][Ext] =  $Name_{sub}^{sup}Ext$ 
  • \txtargabr{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg)Ext2$ 
  • \txtparabr{Name}[sub][sup][Ext1]{Par}[Ext2] =  $Name_{sub}^{sup}Ext1[Par]Ext2$ 
340 %% Style for Abbreviations
341 \cmdtxtall{abr}\newcommand{\txtstyabr}{\em}

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

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

```

```

\cmdtxtoargabr ... to do!
    • \cmdtxtoargabr{cmdName};
      \cmdName[sub][sub][arg] =  $\text{cmdName}_{\text{sub}}^{\text{sub}}(\text{arg})$ 
    • \cmdtxtoargabr{cmdName}[newName];
      \cmdName[sub][sub][arg] =  $\text{newName}_{\text{sub}}^{\text{sub}}(\text{arg})$ 
346 \newcommandx{\cmdtxtoargabr}[2][2=]
347   {\usrtxt{#1}{-}{oargabr}{#2}}

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

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

352 %%*****%

\txtname, ... ... to do!
    • \txtname{Name}[sub][sup][Ext] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT}$ 
    • \txtargname{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}(\text{ARG})\text{EXT2}$ 
    • \txtparname{Name}[sub][sup][Ext1]{Par}[Ext2] =  $\text{NAME}_{\text{SUB}}^{\text{SUP}}\text{EXT1}[\text{PAR}]\text{EXT2}$ 
353 %% Style for Names
354 \cmdtxtall{name}\newcommand{\txtstname}{\mdseries\scshape\sffamily}

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

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

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

```

```

\cmdtxtparname ... to do!
    • \cmdtxtparname{cmdName};
      \cmdName[sub][sub][ext1]{par}[ext2] = CMDNAMESUBEXT1[PAR]EXT2
    • \cmdtxtparname{cmdName}[newName];
      \cmdName[sub][sub][ext1]{par}[ext2] = NEWNAMESUBEXT1[PAR]EXT2
361 \newcommandx{\cmdtxtparname}[2][2=]
362   {\usrtxt{#1}{-}{parname}{#2}}

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

\txtcom, ... ... to do!
    • \txtcom{Name}[sub][sup][Ext] = NAMESUPEXT
    • \txtargcom{Name}[sub][sup][Ext1]{Arg}[Ext2] = NAMESUPEXT1(ARG)EXT2
    • \txtparcom{Name}[sub][sup][Ext1]{Par}[Ext2] = NAMESUPEXT1[PAR]EXT2
365 %% Style for Complexities
366 \cmdtxtall{com}\newcommand{\txtstycom}{\mdseries\scshape\rmfamily}

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

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

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

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

\cmdtxttoparcom ... to do!

```

- $\backslash\text{cmdttxtoparcom}\{\text{cmdName}\};$
 $\backslash\text{cmdName}[\text{sub}][\text{sub}][\text{par}] = \text{CMDNAME}_{\text{SUB}}^{\text{SUB}}[\text{PAR}]$
- $\backslash\text{cmdttxtoparcom}\{\text{cmdName}\}[\text{newName}];$
 $\backslash\text{cmdName}[\text{sub}][\text{sub}][\text{par}] = \text{NEWNAME}_{\text{SUB}}^{\text{SUB}}[\text{PAR}]$

```

375 \newcommandx{\cmdttxtoparcom}[2][2=]
376   {\usrtxt{\#1}\{\oparcom\}[\#2]}

377 \fi
378 %%*****%
379 %%*****%
380 %%** Math Macro Generators *****%
381 %%*****%
382 \ifmthgen@

```

$\backslash\text{mthname}, \dots$... to do!

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

```

383 %% Style for Names
384 \cmdmthall{name}\newcommand{\mthstname}\{\mathcal\}

```

$\backslash\text{AName}, \dots$... to do!

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

```

385 \seqoflatupp{Name}\{mthname\}

```

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

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

```

386 \newcommandx{\cmdmthname}[2][2=]
387   {\usrmth{\#1}\{Name\}\{name\}[\#2]}

```

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

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

```

388 \newcommandx{\cmdmthargname}[2][2=]
389   {\usrmth{\#1}\{Name\}\{argname\}[\#2]}

```

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

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

```

390 \newcommandx{\cmdmthoargname}[2][2=]
391   {\usrmth{\#1}\{Name\}\{oargname\}[\#2]}

```

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

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

```

392 \newcommandx{\cmdmthparname}[2][2=]
393   {\usrmth{\#1}\{Name\}\{parname\}[\#2]}

```

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

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

394 `\newcommandx{\cmdmthoparname}[2][2=]`
395 `{\usrmth{#1}{Name}{oparname}[#2]}`

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

- `\mthfam{NAME}[sub][sup][Ext] = \mathcal{NAME}_{\text{sub}}^{\text{sup}}Ext`
- `\mthargfam{NAME}[sub][sup][Ext1]{Arg}[Ext2] = \mathcal{NAME}_{\text{sub}}^{\text{sup}}Ext1(Arg)Ext2`
- `\mthparfam{NAME}[sub][sup][Ext1]{Par}[Ext2] = \mathcal{NAME}_{\text{sub}}^{\text{sup}}Ext1[Par]Ext2`

396 `%% Style for Families`
397 `\cmdmthall{fam}\newcommand{\mthstyfam}{\mathscr}`

`\AFam, ...` ... to do!

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

398 `\seqoflatupp{Fam}{mthfam}`

`\cmdmthfam` ... to do!

- `\cmdmthfam{CMDNAME};`
 $\text{CMDNAME}_{\text{Fam}}[\text{sub}][\text{sub}][\text{ext}] = \mathcal{CMDNAME}_{\text{sub}}^{\text{sub}}\text{ext}$
- `\cmdmthfam{cmdName}{NEWNAME};`
 $\text{cmdName}_{\text{Fam}}[\text{sub}][\text{sub}][\text{ext}] = \mathcal{NEWNAME}_{\text{sub}}^{\text{sub}}\text{ext}$

399 `\newcommandx{\cmdmthfam}[2][2=]`
400 `{\usrmth{#1}{Fam}{fam}[#2]}`

`\cmdmthargfam` ... to do!

- `\cmdmthargfam{CMDNAME};`
 $\text{CMDNAME}_{\text{Fam}}[\text{sub}][\text{sub}][\text{ext1}]{\text{arg}}[\text{ext2}] = \mathcal{CMDNAME}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$
- `\cmdmthargfam{cmdName}{NEWNAME};`
 $\text{cmdName}_{\text{Fam}}[\text{sub}][\text{sub}][\text{ext1}]{\text{arg}}[\text{ext2}] = \mathcal{NEWNAME}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$

401 `\newcommandx{\cmdmthargfam}[2][2=]`
402 `{\usrmth{#1}{Fam}{argfam}[#2]}`

`\cmdmthoargfam` ... to do!

- `\cmdmthoargfam{CMDNAME};`
 $\text{CMDNAME}_{\text{Fam}}[\text{sub}][\text{sub}][\text{arg}] = \mathcal{CMDNAME}_{\text{sub}}^{\text{sub}}(\text{arg})$
- `\cmdmthoargfam{cmdFam}{NEWNAME};`
 $\text{cmdFam}_{\text{Fam}}[\text{sub}][\text{sub}][\text{arg}] = \mathcal{NEWNAME}_{\text{sub}}^{\text{sub}}(\text{arg})$

403 `\newcommandx{\cmdmthoargfam}[2][2=]`
404 `{\usrmth{#1}{Fam}{oargfam}[#2]}`

`\cmdmthparfam` ... to do!

- `\cmdmthparfam{CMDNAME};`
 $\text{CMDNAME}_{\text{Fam}}[\text{sub}][\text{sub}][\text{ext1}]{\text{par}}[\text{ext2}] = \mathcal{CMDNAME}_{\text{sub}}^{\text{sub}}\text{ext1}[\text{par}]\text{ext2}$
- `\cmdmthparfam{cmdName}{NEWNAME};`
 $\text{cmdName}_{\text{Fam}}[\text{sub}][\text{sub}][\text{ext1}]{\text{par}}[\text{ext2}] = \mathcal{NEWNAME}_{\text{sub}}^{\text{sub}}\text{ext1}[\text{par}]\text{ext2}$

405 `\newcommandx{\cmdmthparfam}[2][2=]`
406 `{\usrmth{#1}{Fam}{parfam}[#2]}`

`\cmdmthoparfam` ... to do!

- `\cmdmthoparfam{CMDNAME};`
 $\text{CMDNAME}_{\text{Fam}}[\text{sub}][\text{sub}][\text{par}] = \mathcal{CMDNAME}_{\text{sub}}^{\text{sub}}[\text{par}]$
- `\cmdmthoparfam{cmdFam}{NEWNAME};`
 $\text{cmdFam}_{\text{Fam}}[\text{sub}][\text{sub}][\text{par}] = \mathcal{NEWNAME}_{\text{sub}}^{\text{sub}}[\text{par}]$

407 `\newcommandx{\cmdmthoparfam}[2][2=]`
408 `{\usrmth{#1}{Fam}{oparfam}[#2]}`

```

\mathcls, ... ... to do!
    • \mathcls{NAME}[sub][sup][Ext] =  $\mathcal{NAME}_{sub}^{sup}Ext$ 
    • \mathargcls{NAME}[sub][sup][Ext1]{Arg}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1(Arg)Ext2$ 
    • \mathparcls{NAME}[sub][sup][Ext1]{Par}[Ext2] =  $\mathcal{NAME}_{sub}^{sup}Ext1[Par]Ext2$ 
409 %% Style for Classes
410 \cmdmthall{cls}\newcommand{\mthstycls}{\matheus}

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

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

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

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

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

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

\mthsig, ... ... to do!
    • \mthsig{Name}[sub][sup][Ext] =  $\mathcal{ame}_{sub}^{sup}Ext$ 
    • \mthargsig{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $\mathcal{ame}_{sub}^{sup}Ext1(Arg)Ext2$ 
    • \mthparsig{Name}[sub][sup][Ext1]{Par}[Ext2] =  $\mathcal{ame}_{sub}^{sup}Ext1[Par]Ext2$ 
422 %% Style for Signatures
423 \cmdmthall{sig}\newcommand{\mthstysig}{\mathpzc}

```

`\aSig, ...` ... to do!

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

424 `\seqoflatlet{Sig}{mthsig}\seqofgrklow{Sig}{mthsig}`

`\cmdmthsig` ... to do!

- `\cmdmthsig{cmdName};`
`\cmdNameSig[sub][sub][ext] = cmdNamesubext`
- `\cmdmthsig{cmdName}[NewName];`
`\cmdNameSig[sub][sub][ext] = NewNamesubext`

425 `\newcommandx{\cmdmthsig}[2][2=]`
426 `{\usrmth{#1}{Sig}{sig}[#2]}`

`\cmdmthargsig` ... to do!

- `\cmdmthargsig{cmdName};`
`\cmdNameSig[sub][sub][ext1]{arg}[ext2] = cmdNamesubext1(arg)ext2`
- `\cmdmthargsig{cmdName}[NewName];`
`\cmdNameSig[sub][sub][ext1]{arg}[ext2] = NewNamesubext1(arg)ext2`

427 `\newcommandx{\cmdmthargsig}[2][2=]`
428 `{\usrmth{#1}{Sig}{argsig}[#2]}`

`\cmdmthoargsig` ... to do!

- `\cmdmthoargsig{cmdName};`
`\cmdNameSig[sub][sub][arg] = cmdNamesub(arg)`
- `\cmdmthoargsig{cmdSig}[NewName];`
`\cmdSigSig[sub][sub][arg] = NewNamesub(arg)`

429 `\newcommandx{\cmdmthoargsig}[2][2=]`
430 `{\usrmth{#1}{Sig}{oargsig}[#2]}`

`\cmdmthparsig` ... to do!

- `\cmdmthparsig{cmdName};`
`\cmdNameSig[sub][sub][ext1]{par}[ext2] = cmdNamesubext1[par]ext2`
- `\cmdmthparsig{cmdName}[NewName];`
`\cmdNameSig[sub][sub][ext1]{par}[ext2] = NewNamesubext1[par]ext2`

431 `\newcommandx{\cmdmthparsig}[2][2=]`
432 `{\usrmth{#1}{Sig}{parsig}[#2]}`

`\cmdmthoparsig` ... to do!

- `\cmdmthoparsig{cmdName};`
`\cmdNameSig[sub][sub][par] = cmdNamesub[par]`
- `\cmdmthoparsig{cmdSig}[NewName];`
`\cmdSigSig[sub][sub][par] = NewNamesub[par]`

433 `\newcommandx{\cmdmthoparsig}[2][2=]`
434 `{\usrmth{#1}{Sig}{oparsig}[#2]}`

`\mthstr, ...` ... to do!

- `\mthstr{Name}[sub][sup][Ext] = NamesupExt`
- `\mthargstr{Name}[sub][sup][Ext1]{Arg}[Ext2] = NamesupExt1(Arg)Ext2`
- `\mthparstr{Name}[sub][sup][Ext1]{Par}[Ext2] = NamesupExt1[Par]Ext2`

435 `%% Style for Structures`
436 `\cmdmthall{str}\newcommand{\mthstystyr}{\mathfrak}`

`\aStr, ...` ... to do!

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

437 `\seqoflatlet{Str}{mthstr}\seqofgrklow{Str}{mthstr}`

```

\cmdmthstr ... to do!
    • \cmdmthstr{cmdName};
      \cmdNameStr[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthstr{cmdName}[NewName];
      \cmdNameStr[sub][sub][ext] = NewNamesubsubext
438 \newcommandx{\cmdmthstr}[2][2=]
439   {\usrmth{#1}{Str}{str}[#2]}

\cmdmthargstr ... to do!
    • \cmdmthargstr{cmdName};
      \cmdNameStr[sub][sub][ext1]{arg}[ext2] = cmdNamesubsubext1(arg)ext2
    • \cmdmthargstr{cmdName}[NewName];
      \cmdNameStr[sub][sub][ext1]{arg}[ext2] = NewNamesubsubext1(arg)ext2
440 \newcommandx{\cmdmthargstr}[2][2=]
441   {\usrmth{#1}{Str}{argstr}[#2]}

\cmdmthoargstr ... to do!
    • \cmdmthoargstr{cmdName};
      \cmdNameStr[sub][sub][arg] = cmdNamesubsub(arg)
    • \cmdmthoargstr{cmdStr}[NewName];
      \cmdStrStr[sub][sub][arg] = NewNamesubsub(arg)
442 \newcommandx{\cmdmthoargstr}[2][2=]
443   {\usrmth{#1}{Str}{oargstr}[#2]}

\cmdmthparstr ... to do!
    • \cmdmthparstr{cmdName};
      \cmdNameStr[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparstr{cmdName}[NewName];
      \cmdNameStr[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
444 \newcommandx{\cmdmthparstr}[2][2=]
445   {\usrmth{#1}{Str}{parstr}[#2]}

\cmdmthoparstr ... to do!
    • \cmdmthoparstr{cmdName};
      \cmdNameStr[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparstr{cmdStr}[NewName];
      \cmdStrStr[sub][sub][par] = NewNamesubsub[par]
446 \newcommandx{\cmdmthoparstr}[2][2=]
447   {\usrmth{#1}{Str}{oparstr}[#2]}

\mthset, ... ... to do!
    • \mthset{Name}[sub][sup][Ext] = NamesupsubExt
    • \mthargset{Name}[sub][sup][Ext1]{Arg}[Ext2] = NamesupsubExt1(Arg)Ext2
    • \mthparset{Name}[sub][sup][Ext1]{Par}[Ext2] = NamesupsubExt1[Par]Ext2
448 %% Style for Sets
449 \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
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$ 
A, B,  $\Gamma$ ,  $\Delta$ , E, Z, H,  $\Theta$ ,  $\Theta$ , I, K, K,  $\Lambda$ , M, N,  $\Xi$ , O,  $\Pi$ ,  $\Pi$ , P, P,  $\Sigma$ ,  $\Sigma$ , T,  $\Upsilon$ ,  $\Phi$ ,  $\Phi$ , X,  $\Psi$ ,  $\Omega$ 
450 \seqoflet{Set}{mthset}

\cmdmthset ... to do!
    • \cmdmthset{cmdName};
      \cmdNameSet[sub][sub][ext] = cmdNamesubsubext

```

```

    • \cmdmthset{cmdName}[NewName];
      \cmdNameSet[sub][sub][ext] = NewNamesubext
451 \newcommandx{\cmdmthset}[2][2=]
452   {\usrmth{#1}{Set}{set}[#2]}

\cmdmthargset ... to do!
    • \cmdmthargset{cmdName};
      \cmdNameSet[sub][sub][ext1]{arg}[ext2] = cmdNamesubext1(arg)ext2
    • \cmdmthargset{cmdName}[NewName];
      \cmdNameSet[sub][sub][ext1]{arg}[ext2] = NewNamesubext1(arg)ext2
453 \newcommandx{\cmdmthargset}[2][2=]
454   {\usrmth{#1}{Set}{argset}[#2]}

\cmdmthoargset ... to do!
    • \cmdmthoargset{cmdName};
      \cmdNameSet[sub][sub][arg] = cmdNamesub(arg)
    • \cmdmthoargset{cmdSet}[NewName];
      \cmdSetSet[sub][sub][arg] = NewNamesub(arg)
455 \newcommandx{\cmdmthoargset}[2][2=]
456   {\usrmth{#1}{Set}{oargset}[#2]}

\cmdmthparset ... to do!
    • \cmdmthparset{cmdName};
      \cmdNameSet[sub][sub][ext1]{par}[ext2] = cmdNamesubext1[par]ext2
    • \cmdmthparset{cmdName}[NewName];
      \cmdNameSet[sub][sub][ext1]{par}[ext2] = NewNamesubext1[par]ext2
457 \newcommandx{\cmdmthparset}[2][2=]
458   {\usrmth{#1}{Set}{parset}[#2]}

\cmdmthoparset ... to do!
    • \cmdmthoparset{cmdName};
      \cmdNameSet[sub][sub][par] = cmdNamesub[par]
    • \cmdmthoparset{cmdSet}[NewName];
      \cmdSetSet[sub][sub][par] = NewNamesub[par]
459 \newcommandx{\cmdmthoparset}[2][2=]
460   {\usrmth{#1}{Set}{oparset}[#2]}

\cmdmthsetext ... to do!
461 \newcommandx{\cmdmthsetext}[3][2=, 3=]
462   {\cmdmthset{#1}[#2]\caselower[q]{#1}%
463   \usrmthlet{\thestring}{Sym}{sym}[\defval{#3}{\lowercase{#2}}}%
464   \usrmthlet{\thestring}{Elm}{elm}[\defval{#3}{\lowercase{#2}}]}

\mthrel, ... ... to do!
    • \mthrel{Name}[sub][sup][Ext] = NamesupsubExt
    • \mthargrel{Name}[sub][sup][Ext1]{Arg}[Ext2] = NamesupsubExt1(Arg)Ext2
    • \mthparrel{Name}[sub][sup][Ext1]{Par}[Ext2] = NamesupsubExt1[Par]Ext2
465 %% Style for Relations
466 \cmdmthall{rel}\newcommand{\mthstyrel}{\mathit}

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

\cmdmthrel ... to do!

```

```

    • \cmdmthrel{cmdName};
      \cmdNameRel[sub][sub][ext] =  $cmdName_{sub}^{sub}ext$ 
    • \cmdmthrel{cmdName}[NewName];
      \cmdNameRel[sub][sub][ext] =  $NewName_{sub}^{sub}ext$ 
468 \newcommandx{\cmdmthrel}[2][2=]
469   {\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] =  $NewName_{sub}^{sub}ext1(arg)ext2$ 
470 \newcommandx{\cmdmthargrel}[2][2=]
471   {\usrmth{#1}{Rel}{argrel}{#2}}

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

\cmdmthparrel ... to do!
    • \cmdmthparrel{cmdName};
      \cmdNameRel[sub][sub][ext1]{par}[ext2] =  $cmdName_{sub}^{sub}ext1[par]ext2$ 
    • \cmdmthparrel{cmdName}[NewName];
      \cmdNameRel[sub][sub][ext1]{par}[ext2] =  $NewName_{sub}^{sub}ext1[par]ext2$ 
474 \newcommandx{\cmdmthparrel}[2][2=]
475   {\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] =  $NewName_{sub}^{sub}[par]$ 
476 \newcommandx{\cmdmthoparrel}[2][2=]
477   {\usrmth{#1}{Rel}{oparrel}{#2}}

\mthfun, ... ... to do!
    • \mthfun{Name}[sub][sup][Ext] =  $Name_{sub}^{sup}Ext$ 
    • \mthargfun{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $Name_{sub}^{sup}Ext1(Arg)Ext2$ 
    • \mthparfun{Name}[sub][sup][Ext1]{Par}[Ext2] =  $Name_{sub}^{sup}Ext1[Par]Ext2$ 
478 %% Style for Functions
479 \cmdmthall{fun}\newcommand{\mthstyfun}{\mathsf}

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

\cmdmthfun ... to do!
    • \cmdmthfun{cmdName};
      \cmdNameFun[sub][sub][ext] =  $cmdName_{sub}^{sub}ext$ 
    • \cmdmthfun{cmdName}[NewName];
      \cmdNameFun[sub][sub][ext] =  $NewName_{sub}^{sub}ext$ 

```

```

481 \newcommandx{\cmdmthfun}[2][2=]
482   {\usrmth{#1}{Fun}{fun}{#2}}

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

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

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

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

\mthsym, ... ... to do!
  • \mthsym{Name}[sub][sup][Ext] = NamesupsubExt
  • \mthargsym{Name}[sub][sup][Ext1]{Arg}[Ext2] = NamesupsubExt1(Arg)Ext2
  • \mthparsym{Name}[sub][sup][Ext1]{Par}[Ext2] = NamesupsubExt1[Par]Ext2
491 %% Style for Symbols
492 \cmdmthall{sym}\newcommand{\mthstysym}{\mathhtt}

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

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

\cmdmthargsym ... to do!

```

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

496 $\backslash\text{newcommandx}\{\backslash\text{cmdmthargsym}\}[2][2=]$
497 $\{\backslash\text{usrmth}\{\#1\}\{\text{Sym}\}\{\text{argsym}\}[\#2]\}$

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

- $\backslash\text{cmdmthoargsym}\{\text{cmdName}\};$
 $\backslash\text{cmdNameSym}[\text{sub}][\text{sub}][\text{arg}] = \text{cmdName}_{sub}^{sub}(\text{arg})$
- $\backslash\text{cmdmthoargsym}\{\text{cmdSym}\}[\text{NewName}];$
 $\backslash\text{cmdSymSym}[\text{sub}][\text{sub}][\text{arg}] = \text{NewName}_{sub}^{sub}(\text{arg})$

498 $\backslash\text{newcommandx}\{\backslash\text{cmdmthoargsym}\}[2][2=]$
499 $\{\backslash\text{usrmth}\{\#1\}\{\text{Sym}\}\{\text{oargsym}\}[\#2]\}$

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

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

500 $\backslash\text{newcommandx}\{\backslash\text{cmdmthparsym}\}[2][2=]$
501 $\{\backslash\text{usrmth}\{\#1\}\{\text{Sym}\}\{\text{parsym}\}[\#2]\}$

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

- $\backslash\text{cmdmthoparsym}\{\text{cmdName}\};$
 $\backslash\text{cmdNameSym}[\text{sub}][\text{sub}][\text{par}] = \text{cmdName}_{sub}^{sub}[\text{par}]$
- $\backslash\text{cmdmthoparsym}\{\text{cmdSym}\}[\text{NewName}];$
 $\backslash\text{cmdSymSym}[\text{sub}][\text{sub}][\text{par}] = \text{NewName}_{sub}^{sub}[\text{par}]$

502 $\backslash\text{newcommandx}\{\backslash\text{cmdmthoparsym}\}[2][2=]$
503 $\{\backslash\text{usrmth}\{\#1\}\{\text{Sym}\}\{\text{oparsym}\}[\#2]\}$

$\backslash\text{mthelm}$, to do!

- $\backslash\text{mthelm}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{Name}_{sub}^{sup}\text{Ext}$
- $\backslash\text{mthargelm}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{Name}_{sub}^{sup}\text{Ext1}(\text{Arg})\text{Ext2}$
- $\backslash\text{mthparelm}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{sub}^{sup}\text{Ext1}[\text{Par}]\text{Ext2}$

504 %% Style for Elements
505 $\backslash\text{cmdmthall}\{\text{elm}\}\backslash\text{newcommand}\{\backslash\text{mthstyelm}\}\{\backslash\text{mathnormal}\}$

$\backslash\text{aElm}$, to do!

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

506 $\backslash\text{seqoflet}\{\text{Elm}\}\{\text{mthelm}\}$

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

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

507 $\backslash\text{newcommandx}\{\backslash\text{cmdmthelm}\}[2][2=]$
508 $\{\backslash\text{usrmth}\{\#1\}\{\text{Elm}\}\{\text{elm}\}[\#2]\}$

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

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


```

509 \newcommandx{\cmdmthargelm}[2][2=]
510   {\usrmth{#1}{Elm}{argelm}{#2}}

```

\cmdmthoargelm ... to do!

- \cmdmthoargelm{cmdName};
\cmdNameElm[sub][sub][arg] = $cmdName_{sub}^{sub}(arg)$
- \cmdmthoargelm{cmdElm}[NewName];
\cmdElmElm[sub][sub][arg] = $NewName_{sub}^{sub}(arg)$

```

511 \newcommandx{\cmdmthoargelm}[2][2=]
512   {\usrmth{#1}{Elm}{oargelm}{#2}}

```

\cmdmthparelm ... to do!

- \cmdmthparelm{cmdName};
\cmdNameElm[sub][sub][ext1]{par}[ext2] = $cmdName_{sub}^{sub}ext1[par]ext2$
- \cmdmthparelm{cmdName}[NewName];
\cmdNameElm[sub][sub][ext1]{par}[ext2] = $NewName_{sub}^{sub}ext1[par]ext2$

```

513 \newcommandx{\cmdmthparelm}[2][2=]
514   {\usrmth{#1}{Elm}{parelm}{#2}}

```

\cmdmthoparelm ... to do!

- \cmdmthoparelm{cmdName};
\cmdNameElm[sub][sub][par] = $cmdName_{sub}^{sub}[par]$
- \cmdmthoparelm{cmdElm}[NewName];
\cmdElmElm[sub][sub][par] = $NewName_{sub}^{sub}[par]$

```

515 \newcommandx{\cmdmthoparelm}[2][2=]
516   {\usrmth{#1}{Elm}{oparelm}{#2}}

```

```

517 %%*****%

```

\cmdmthsymelm ... to do!

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

```

518 \newcommandx{\cmdmthsymelm}[2][2=]
519   {\cmdmthsym{#1}{#2}}%
520   \cmdmthelm{#1}{#2}}

```

\cmdmthargsymelm ... to do!

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

```

521 \newcommandx{\cmdmthargsymelm}[2][2=]
522   {\cmdmthargsym{#1}{#2}}%
523   \cmdmthargelm{#1}{#2}}

```

\cmdmthoargsymelm ... to do!

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

```

524 \newcommandx{\cmdmthoargsymelm}[2][2=]
525   {\cmdmthoargsym{#1}[#2]}
526   \cmdmthoargelm{#1}[#2]}

```

\cmdmthparsymelm ... to do!

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

```

527 \newcommandx{\cmdmthparsymelm}[2][2=]
528   {\cmdmthparsym{#1}[#2]}
529   \cmdmthparelm{#1}[#2]}

```

\cmdmthoparsymelm ... to do!

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

```

530 \newcommandx{\cmdmthoparsymelm}[2][2=]
531   {\cmdmthoparsym{#1}[#2]}
532   \cmdmthoparelm{#1}[#2]}

```

```

533 %%*****%

```

\mthsnt, ... to do!

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

```

534 %% Style for Sentences
535 \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
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$
A, B, $\Gamma, \Delta, E, Z, H, \Theta, \varnothing, I, K, \Lambda, M, N, \Xi, O, \Pi, \text{II}, P, \Sigma, \varSigma, T, \Upsilon, \Phi, \varPhi, X, \Psi, \Omega$

```

536 \seqoflet{Snt}{mthsnt}

```

\cmdmthsnt ... to do!

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

```

537 \newcommandx{\cmdmthsnt}[2][2=]
538   {\usrmth{#1}{Snt}{snt}[#2]}

```

\cmdmthargsnt ... to do!

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

```

539 \newcommandx{\cmdmthargsnt}[2][2=]
540   {\usrmth{#1}{Snt}{argsnt}[#2]}

```

\cmdmthoargsnt ... to do!

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

541 $\backslash\text{newcommandx}\{\backslash\text{cmdmthoargsnt}\}[2][2=]$
542 $\{\backslash\text{usrmth}\{\#1\}\{\text{Snt}\}\{\text{oargsnt}\}\{\#2\}\}$

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

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

543 $\backslash\text{newcommandx}\{\backslash\text{cmdmthparsnt}\}[2][2=]$
544 $\{\backslash\text{usrmth}\{\#1\}\{\text{Snt}\}\{\text{parsnt}\}\{\#2\}\}$

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

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

545 $\backslash\text{newcommandx}\{\backslash\text{cmdmthoparsnt}\}[2][2=]$
546 $\{\backslash\text{usrmth}\{\#1\}\{\text{Snt}\}\{\text{oparsnt}\}\{\#2\}\}$

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

- $\backslash\text{mthfrm}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext}$
- $\backslash\text{mthargfrm}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Arg}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}$
- $\backslash\text{mthparfrm}\{\text{Name}\}[\text{sub}][\text{sup}][\text{Ext1}]\{\text{Par}\}[\text{Ext2}] = \text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$

547 %% Style for Formulae
548 $\backslash\text{cmdmthall}\{\text{frm}\}\backslash\text{newcommand}\{\backslash\text{mthstyfrm}\}\{\backslash\text{mathit}\}$

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

$a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$
 $A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z$
 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \varpi, \rho, \varrho, \sigma, \varsigma, \tau, \upsilon, \phi, \varphi, \chi, \psi, \omega$
 $\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \mathcal{E}, \mathcal{F}, \mathcal{G}, \mathcal{H}, \mathcal{I}, \mathcal{J}, \mathcal{K}, \mathcal{L}, \mathcal{M}, \mathcal{N}, \mathcal{O}, \mathcal{P}, \mathcal{Q}, \mathcal{R}, \mathcal{S}, \mathcal{T}, \mathcal{U}, \mathcal{V}, \mathcal{W}, \mathcal{X}, \mathcal{Y}, \mathcal{Z}$
549 $\backslash\text{seqoflet}\{\text{Frm}\}\{\text{mthfrm}\}$

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

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

550 $\backslash\text{newcommandx}\{\backslash\text{cmdmthfrm}\}[2][2=]$
551 $\{\backslash\text{usrmth}\{\#1\}\{\text{Frm}\}\{\text{frm}\}\{\#2\}\}$

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

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

552 $\backslash\text{newcommandx}\{\backslash\text{cmdmthargfrm}\}[2][2=]$
553 $\{\backslash\text{usrmth}\{\#1\}\{\text{Frm}\}\{\text{argfrm}\}\{\#2\}\}$

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

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

```

554 \newcommandx{\cmdmthoargfrm}[2][2=]
555   {\usrmth{#1}{Frm}{oargfrm}[#2]}

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

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

560 %%*****%

\mthmat, ... ... to do!
  • \mthmat{Name}[sub][sup][Ext] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext}$ 
  • \mthargmat{Name}[sub][sup][Ext1]{Arg}[Ext2] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}(\text{Arg})\text{Ext2}$ 
  • \mthparmat{Name}[sub][sup][Ext1]{Par}[Ext2] =  $\text{Name}_{\text{sub}}^{\text{sup}}\text{Ext1}[\text{Par}]\text{Ext2}$ 
561 %% Style for Matrices
562 \cmdmthall{\mat}\newcommand{\mthstymat}[1]{\boldsymbol{\mathsf{#1}}}

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

\cmdmthmat ... to do!
  • \cmdmthmat{cmdName};
    \cmdNameMat[sub][sub][ext] =  $\text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext}$ 
  • \cmdmthmat{cmdName}[NewName];
    \cmdNameMat[sub][sub][ext] =  $\text{NewName}_{\text{sub}}^{\text{sub}}\text{ext}$ 
564 \newcommandx{\cmdmthmat}[2][2=]
565   {\usrmth{#1}{Mat}{mat}[#2]}

\cmdmthargmat ... to do!
  • \cmdmthargmat{cmdName};
    \cmdNameMat[sub][sub][ext1]{arg}[ext2] =  $\text{cmdName}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$ 
  • \cmdmthargmat{cmdName}[NewName];
    \cmdNameMat[sub][sub][ext1]{arg}[ext2] =  $\text{NewName}_{\text{sub}}^{\text{sub}}\text{ext1}(\text{arg})\text{ext2}$ 
566 \newcommandx{\cmdmthargmat}[2][2=]
567   {\usrmth{#1}{Mat}{argmat}[#2]}

\cmdmthoargmat ... to do!
  • \cmdmthoargmat{cmdName};
    \cmdNameMat[sub][sub][arg] =  $\text{cmdName}_{\text{sub}}^{\text{sub}}(\text{arg})$ 
  • \cmdmthoargmat{cmdName}[NewName];
    \cmdNameMat[sub][sub][arg] =  $\text{NewName}_{\text{sub}}^{\text{sub}}(\text{arg})$ 
568 \newcommandx{\cmdmthoargmat}[2][2=]
569   {\usrmth{#1}{Mat}{oargmat}[#2]}

```

```

\cmdmthparmat ... to do!
    • \cmdmthparmat{cmdName};
      \cmdNameMat[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2
    • \cmdmthparmat{cmdName}[NewName];
      \cmdNameMat[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
570 \newcommandx{\cmdmthparmat}[2][2=]
571   {\usrmth{#1}{Mat}{parmat}{#2}}

\cmdmthoparmat ... to do!
    • \cmdmthoparmat{cmdName};
      \cmdNameMat[sub][sub][par] = cmdNamesubsub[par]
    • \cmdmthoparmat{cmdName}[NewName];
      \cmdNameMat[sub][sub][par] = NewNamesubsub[par]
572 \newcommandx{\cmdmthoparmat}[2][2=]
573   {\usrmth{#1}{Mat}{oparmat}{#2}}

\mthvec, ... ... to do!
    • \mthvec{Name}[sub][sup][Ext] = NamesubsupExt
    • \mthargvec{Name}[sub][sup][Ext1]{Arg}[Ext2] = NamesubsupExt1(Arg)Ext2
    • \mthparvec{Name}[sub][sup][Ext1]{Par}[Ext2] = NamesubsupExt1[Par]Ext2
574 %% Style for Vectors
575 \cmdmthall{vec}\newcommand{\mthstyvec}[1]{\boldsymbol{\mathit{#1}}}

\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
α, β, γ, δ, ε, ζ, η, θ, ϑ, ι, κ, λ, μ, ν, ξ, ο, π, ϖ, ρ, ϱ, σ, ς, τ, υ, φ, ϕ, χ, ψ, ω
A, B, Γ, Δ, E, E, Z, H, Θ, Θ, I, K, K, Λ, M, N, Ξ, O, Π, Π, P, P, Σ, Σ, T, Υ, Φ, Φ, X, Ψ, Ω
576 \seqoflet{Vec}{mthvec}

\cmdmthvec ... to do!
    • \cmdmthvec{cmdName};
      \cmdNameVec[sub][sub][ext] = cmdNamesubsubext
    • \cmdmthvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][ext] = NewNamesubsubext
577 \newcommandx{\cmdmthvec}[2][2=]
578   {\usrmth{#1}{Vec}{vec}{#2}}

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

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

\cmdmthparvec ... to do!
    • \cmdmthparvec{cmdName};
      \cmdNameVec[sub][sub][ext1]{par}[ext2] = cmdNamesubsubext1[par]ext2

```

```

    • \cmdmthparvec{cmdName}[NewName];
      \cmdNameVec[sub][sub][ext1]{par}[ext2] = NewNamesubsubext1[par]ext2
583 \newcommandx{\cmdmthparvec}[2][2=]
584   {\usrmth{#1}{Vec}{parvec}[#2]}

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

587 \fi
588 %*****%
589 %*****%
590 %** Elementary Macros for Text *****%
591 %*****%
592 \iftext@
593 %** Latin Abbreviations *****%

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

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

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

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

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

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

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

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

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

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

\ergo    • \ergo = ergo
604 \cmdtxtabr{\ergo}

\errata    • \errata = errata
605 \cmdtxtabr{\errata}

\erratum    • \erratum = erratum
606 \cmdtxtabr{\erratum}

```

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

`\etc` • `\etc` = *etc.*
608 `\cmdtxtabr{etc}[etc.]`

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

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

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

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

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

`\vs` • `\vs` = *vs.*
614 `\cmdtxtabr{vs}[vs.]`

`\viz` • `\viz` = *viz.*
615 `\cmdtxtabr{viz}[viz.]`

616 `%%*****`

`\Dedicto` • `\Dedicto` = *De dicto*
617 `\cmdtxtabr{Dedicto}[De dicto]`

`\Defacto` • `\Defacto` = *De facto*
618 `\cmdtxtabr{Defacto}[De facto]`

`\Dere` • `\Dere` = *De re*
619 `\cmdtxtabr{Dere}[De re]`

`\Divideetimpera` • `\Divideetimpera` = *Divide et impera*
620 `\cmdtxtabr{Divideetimpera}[Divide et impera]`

`\Eg` • `\Eg` = *E.g.*
621 `\cmdtxtabr{Eg}[E.g.]`

`\Errata` • `\Errata` = *Errata*
622 `\cmdtxtabr{Errata}`

`\Erratum` • `\Erratum` = *Erratum*
623 `\cmdtxtabr{Erratum}`

`\Percontra` • `\Percontra` = *Per contra*
624 `\cmdtxtabr{Percontra}[Per contra]`

`\Primafacie` • `\Primafacie` = *Prima facie*
625 `\cmdtxtabr{Primafacie}[Prima facie]`

`\Viceversa` • `\Viceversa` = *Vice versa*
626 `\cmdtxtabr{Viceversa}[Vice versa]`

627 `%%** Italian Abbreviations *****`

```

...
628 %*****%
...
629 %** French Abbreviations *****%

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

631 %*****%

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

633 %** English Abbreviations *****%

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

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

\iff      • \iff = iff
636 \cmdtxtabr{iff}

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

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

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

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

641 %*****%

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

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

644 \fi
645 %*****%
646 %*****%
647 %** Elementary Macros for Math *****%
648 %*****%
649 \ifmath@

650 %** General Notation *****%

\defeq, \seteq ...
651 \DeclareMathOperator{\defeq}
652   {\ensuremath{\triangleq}}
653 \DeclareMathOperator{\seteq}
654   {\ensuremath{:\!=\,}}
655 %*****%

```



```

\implies, ... ...
656 \DeclareRobustCommand{\implies}
657   {\ensuremath{\rightarrow}}
658 \DeclareRobustCommand{\coimplies}
659   {\ensuremath{\leftrightharpoons}}

660 %%*****%

\cmodels, ... ...
661 \DeclareRobustCommand{\cmodels}
662   {\mth{\,\models}}
663 \DeclareRobustCommand{\notcmodels}
664   {\mth{\,\not\models}}

\cimplies, ... ...
665 \DeclareRobustCommand{\cimplies}
666   {\mth{\,\implies}}
667 \DeclareRobustCommand{\notcimplies}
668   {\mth{\,\not\implies}}

\ccoimplies, ... ...
669 \DeclareRobustCommand{\ccoimplies}
670   {\mth{\,\coimplies}}
671 \DeclareRobustCommand{\notccoimplies}
672   {\mth{\,\not\coimplies}}

\cequiv, ... ...
673 \DeclareRobustCommand{\cequiv}
674   {\mth{\,\equiv}}
675 \DeclareRobustCommand{\notcequiv}
676   {\mth{\,\not\equiv}}

677 %%*****%

\dual, \adj, ... ...
678 \DeclareRobustCommand{\dual}[1]
679   {\mth{\overline{\#1}}}
680 \DeclareRobustCommand{\adj}[1]
681   {\mth{\mathring{\#1}}}
682 \DeclareRobustCommand{\der}[1]
683   {\mth{\widehat{\#1}}}
684 \DeclareRobustCommand{\trn}[1]
685   {\mth{\widetilde{\#1}}}

\vec ...
686 \let\oldvec\vec
687 \DeclareRobustCommand{\vec}[1]
688   {\mth{\oldvec{\#1}}}

689 %%*****%

\enumeration, ... ...
690 \varcmd{enumeration}{\mth}{\{,\}}{\{,\}}{\{,\}}
691 \varcmd{enumerationx}{\mth}{\{;\}}{\{;\}}{\{;\}}

\sequence, ... ...
692 \varcmd{sequence}{\mth}{\left[\,]{,\}\right]}{\{,\}\right]}{\{,\}\right]}
693 \varcmd{sequencex}{\mth}{\left[\,]{;\}\right]}{\{;\}\right]}{\{;\}\right]}

\tuple, ... ...
694 \varcmd{tuple}{\mth}{\left\langle\,]{,\}\right\rangle}{\{,\}\right\rangle}{\{,\}\right\rangle}
695 \varcmd{tuplex}{\mth}{\left\langle\,]{;\}\right\rangle}{\{;\}\right\rangle}{\{;\}\right\rangle}

```

```

696 %** Sets *****%%

\set ...
697 \DeclareRobustCommand{\set}[2]
698   {\mth{\argmid{\{\,\,\}\argsep{#1}{\allowbreak\mid\allowbreak}{#2}}{\,\,\}}}

\card ...
699 \DeclareRobustCommand{\card}[1]
700   {\mth{\argmid{\lvert}{#1}{\rvert}}}

\denot ...
701 \DeclareRobustCommand{\denot}[1]
702   {\mth{\argmid{\lVert}{#1}{\rVert}}}

\pow ...
703 \DeclareRobustCommand{\pow}[1]
704   {\ensuremath{2^{\defval{#1}{\cdot}}}}

705 %** Relations *****%%

\emptyrel ...
706 \DeclareRobustCommand{\emptyrel}
707   {\mth{\varnothing}}

708 %*****%%

\dom, \cod, ... ...
709 \DeclareRobustCommand{\dom}
710   {\mthargfun{\dom}}
711 \DeclareRobustCommand{\cod}
712   {\mthargfun{\cod}}
713 \DeclareRobustCommand{\rng}
714   {\mthargfun{\rng}}
715 \DeclareRobustCommand{\img}
716   {\mthargfun{\img}}

717 %*****%%

\prj ...
718 \DeclareRobustCommand{\prj}
719   {\mthargfun{\prj}}

\rst ...
720 \DeclareMathOperator{\rst}
721   {\ensuremath{\upharpoonright}}

\cmp ...
722 \DeclareMathOperator{\cmp}
723   {\ensuremath{\circ}}

724 %** Functions *****%%

\emptyfun ...
725 \DeclareRobustCommand{\emptyfun}
726   {\mth{\varnothing}}

727 %*****%%

\pto, \pmapsto ...
728 \DeclareMathOperator{\pto}
729   {\ensuremath{\rightharpoonup}}
730 \DeclareMathOperator{\pmapsto}
731   {\ensuremath{\mathrel{\raisebox{0.5ex}{\footnotesize$\llcorner$}}}%
732     \kern-1.5ex\rightharpoonup}}

```

733 %%*****%

\Aomega, \AOmega ...

```
734 \DeclareRobustCommand{\Aomega}
735   {\mthargset{\omega}}
736 \DeclareRobustCommand{\AOmega}
737   {\mthargset{\Omega}}
```

\Atheta, \ATheta ...

```
738 \DeclareRobustCommand{\Atheta}
739   {\mthargset{\theta}}
740 \DeclareRobustCommand{\ATheta}
741   {\mthargset{\Theta}}
```

\Aomicron,

```
742 \DeclareRobustCommand{\Aomicron}
743   {\mthargset{\omicron}}
744 \DeclareRobustCommand{\AOmigron}
745   {\mthargset{\Omicron}}
```

746 %%** Numbers *****%

\SetB ...

```
747 \DeclareRobustCommand{\SetB}
748   {\mthset[mathbb]{B}}
```

\SetF ...

```
749 \DeclareRobustCommand{\SetF}
750   {\mthset[mathbb]{F}}
```

\SetN,

```
751 \DeclareRobustCommand{\SetN}
752   {\mthset[mathbb]{N}}
753 \DeclareRobustCommand{\SetNI}[1] []
754   {\SetN[\infty #1]}
```

\SetZ,

```
755 \DeclareRobustCommand{\SetZ}
756   {\mthset[mathbb]{Z}}
757 \DeclareRobustCommand{\SetZI}[1] []
758   {\SetZ[\pm\infty #1]}
759 \DeclareRobustCommand{\SetZPI}[1] []
760   {\SetZ[+\infty #1]}
761 \DeclareRobustCommand{\SetZNI}[1] []
762   {\SetZ[-\infty #1]}
```

\SetQ,

```
763 \DeclareRobustCommand{\SetQ}
764   {\mthset[mathbb]{Q}}
765 \DeclareRobustCommand{\SetQI}[1] []
766   {\SetQ[\pm\infty #1]}
767 \DeclareRobustCommand{\SetQPI}[1] []
768   {\SetQ[+\infty #1]}
769 \DeclareRobustCommand{\SetQNI}[1] []
770   {\SetQ[-\infty #1]}
```

\SetR,

```
771 \DeclareRobustCommand{\SetR}
772   {\mthset[mathbb]{R}}
773 \DeclareRobustCommand{\SetRI}[1] []
774   {\SetR[\pm\infty #1]}
775 \DeclareRobustCommand{\SetRPI}[1] []
776   {\SetR[+\infty #1]}
777 \DeclareRobustCommand{\SetRNI}[1] []
778   {\SetR[-\infty #1]}
```

```

\SetC, ... ...
779 \DeclareRobustCommand{\SetC}
780   {\mthset[\mathbb]{C}}
781 \DeclareRobustCommand{\SetCI}[1] []
782   {\SetC[\infty #1]}

783 %%*****%

\num, ... ...
784 \DeclareRobustCommand{\num}[1]
785   {\mth{[#1]}}
786 \DeclareRobustCommand{\numcc}[2]
787   {\mth{[\argsep{#1}{,}{#2}]}}
788 \DeclareRobustCommand{\numco}[2]
789   {\mth{[\argsep{#1}{,}{#2})}}
790 \DeclareRobustCommand{\numoc}[2]
791   {\mth{(\argsep{#1}{,}{#2}]}}
792 \DeclareRobustCommand{\numoo}[2]
793   {\mth{(\argsep{#1}{,}{#2})}}

794 %%*****%

\floor, \ceil ...
795 \DeclareRobustCommand{\floor}[1]
796   {\mth{\argmid{\left\lfloor}{#1}{\right\rfloor}}}
797 \DeclareRobustCommand{\ceil}[1]
798   {\mth{\argmid{\left\lceil}{#1}{\right\rceil}}}

799 %%*****%

\arg ...
800 \DeclareRobustCommand{\arg}
801   {\mthfun{arg}}

\evn, \odd ...
802 \DeclareRobustCommand{\evn}
803   {\mthfun{evn}}
804 \DeclareRobustCommand{\odd}
805   {\mthfun{odd}}

\bst, ... ...
806 \DeclareRobustCommand{\bst}
807   {\mthfun{bst}}
808 \DeclareRobustCommand{\argbst}
809   {\mthfun{arg bst}}

\min, \max, ... ...
810 \DeclareRobustCommand{\min}
811   {\mthfun{min}}
812 \DeclareRobustCommand{\max}
813   {\mthfun{max}}
814 \DeclareRobustCommand{\argmin}
815   {\mthfun{arg min}}
816 \DeclareRobustCommand{\argmax}
817   {\mthfun{arg max}}

\inf, \sup ...
818 \DeclareRobustCommand{\inf}
819   {\mthfun{inf}}
820 \DeclareRobustCommand{\sup}
821   {\mthfun{sup}}

822 %%** Sequences *****%

```

```

\fst, \lst ...

823 \DeclareRobustCommand{\fst}
824   {\mthargfun{fst}}
825 \DeclareRobustCommand{\lst}
826   {\mthargfun{lst}}

827 \fi
828 %*****%
829 %*****%
830 %** Macros for Computational-Complexity Classes *****%
831 %*****%
832 \ifcom@

```

\defcomcls ... to do!

- \defcomcls{CompClass};

$$\begin{aligned}
&\text{\CompClass[sub][sup][ext]} = \text{COMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClass[sub][sup][ext]} = \text{CoCOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\CompClassE[sub][sup][ext]} = \text{COMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClassE[sub][sup][ext]} = \text{CoCOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\CompClassH[sub][sup][ext]} = \text{COMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClassH[sub][sup][ext]} = \text{CoCOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\CompClassC[sub][sup][ext]} = \text{COMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClassC[sub][sup][ext]} = \text{CoCOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
\\
&\text{\NCompClass[sub][sup][ext]} = \text{NCOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoNCompClass[sub][sup][ext]} = \text{CoNCOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\NCompClassE[sub][sup][ext]} = \text{NCOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoNCompClassE[sub][sup][ext]} = \text{CoNCOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\NCompClassH[sub][sup][ext]} = \text{NCOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoNCompClassH[sub][sup][ext]} = \text{CoNCOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\NCompClassC[sub][sup][ext]} = \text{NCOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoNCompClassC[sub][sup][ext]} = \text{CoNCOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
\\
&\text{\UCompClass[sub][sup][ext]} = \text{UCOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoUCompClass[sub][sup][ext]} = \text{CoUCOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\UCompClassE[sub][sup][ext]} = \text{UCOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoUCompClassE[sub][sup][ext]} = \text{CoUCOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\UCompClassH[sub][sup][ext]} = \text{UCOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoUCompClassH[sub][sup][ext]} = \text{CoUCOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\UCompClassC[sub][sup][ext]} = \text{UCOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoUCompClassC[sub][sup][ext]} = \text{CoUCOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
\\
&\text{\ACompClass[sub][sup][ext]} = \text{ACOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoACompClass[sub][sup][ext]} = \text{CoACOMPCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\ACompClassE[sub][sup][ext]} = \text{ACOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoACompClassE[sub][sup][ext]} = \text{CoACOMPCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\ACompClassH[sub][sup][ext]} = \text{ACOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoACompClassH[sub][sup][ext]} = \text{CoACOMPCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\ACompClassC[sub][sup][ext]} = \text{ACOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoACompClassC[sub][sup][ext]} = \text{CoACOMPCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT}
\end{aligned}$$
- \defcomcls{CompClass}{NewClass};

$$\begin{aligned}
&\text{\CompClass[sub][sup][ext]} = \text{NEWCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClass[sub][sup][ext]} = \text{CoNEWCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\CompClassE[sub][sup][ext]} = \text{NEWCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClassE[sub][sup][ext]} = \text{CoNEWCLASS-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\CompClassH[sub][sup][ext]} = \text{NEWCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClassH[sub][sup][ext]} = \text{CoNEWCLASS-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
&\text{\CompClassC[sub][sup][ext]} = \text{NEWCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoCompClassC[sub][sup][ext]} = \text{CoNEWCLASS-COMPLETE}_{\text{SUB}}^{\text{SUP}}\text{EXT} \\
\\
&\text{\NCompClass[sub][sup][ext]} = \text{NNEWCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}; \\
&\text{\CoNCompClass[sub][sup][ext]} = \text{CoNNEWCLASS}_{\text{SUB}}^{\text{SUP}}\text{EXT}
\end{aligned}$$

```

\NCompClassE[sub][sup][ext] = NNEWCLASS-EASYSUBEXT;
\CoNCompClassE[sub][sup][ext] = CoNNEWCLASS-EASYSUBEXT
\NCompClassH[sub][sup][ext] = NNEWCLASS-HARDSUBEXT;
\CoNCompClassH[sub][sup][ext] = CoNNEWCLASS-HARDSUBEXT
\NCompClassC[sub][sup][ext] = NNEWCLASS-COMLETESUBEXT;
\CoNCompClassC[sub][sup][ext] = CoNNEWCLASS-COMLETESUBEXT

```

```

\UCompClass[sub][sup][ext] = UNEWCLASSSUBEXT;
\CoUCompClass[sub][sup][ext] = CoUNEWCLASSSUBEXT
\UCompClassE[sub][sup][ext] = UNEWCLASS-EASYSUBEXT;
\CoUCompClassE[sub][sup][ext] = CoUNEWCLASS-EASYSUBEXT
\UCompClassH[sub][sup][ext] = UNEWCLASS-HARDSUBEXT;
\CoUCompClassH[sub][sup][ext] = CoUNEWCLASS-HARDSUBEXT
\UCompClassC[sub][sup][ext] = UNEWCLASS-COMLETESUBEXT;
\CoUCompClassC[sub][sup][ext] = CoUNEWCLASS-COMLETESUBEXT

```

```

\ACompClass[sub][sup][ext] = ANEWCLASSSUBEXT;
\CoACompClass[sub][sup][ext] = CoANEWCLASSSUBEXT
\ACompClassE[sub][sup][ext] = ANEWCLASS-EASYSUBEXT;
\CoACompClassE[sub][sup][ext] = CoANEWCLASS-EASYSUBEXT
\ACompClassH[sub][sup][ext] = ANEWCLASS-HARDSUBEXT;
\CoACompClassH[sub][sup][ext] = CoANEWCLASS-HARDSUBEXT
\ACompClassC[sub][sup][ext] = ANEWCLASS-COMLETESUBEXT;
\CoACompClassC[sub][sup][ext] = CoANEWCLASS-COMLETESUBEXT

```

```

833 \newcommandx{\defcomcls}[2][2=]
834   {\defcomclssem{#1}{\defval{#2}{#1}}%
835   \defcomclssem{#1}{\defval{#2}{#1}}[Co]}
836 \newcommandx{\defcomclsred}[3][3=]
837   {\defcomclsred{#3#1}{#2}{#3}%
838   \defcomclsred{#3N#1}{#2}{#3N}%
839   \defcomclsred{#3U#1}{#2}{#3U}%
840   \defcomclsred{#3A#1}{#2}{#3A}}
841 \newcommandx{\defcomclsred}[3][3=]
842   {\defcomclscmd{#1}{#2}{#3}%
843   \defcomclscmd{#1E}{#2}{#3}[-easy]%
844   \defcomclscmd{#1H}{#2}{#3}[-hard]%
845   \defcomclscmd{#1C}{#2}{#3}[-complete]]%
846 \newcommandx{\defcomclscmd}[4][3=, 4=]
847   {\csdef{#1}{\txtcom{#3#2#4}}}
848 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

\Time, ...
• \Time[sub][sup][ext] = TIMESUBEXT
  \TimeE[sub][sup][ext] = TIME-EASYSUBEXT
  \TimeH[sub][sup][ext] = TIME-HARDSUBEXT
  \TimeC[sub][sup][ext] = TIME-COMLETESUBEXT
• \NTime[sub][sup][ext] = NTIMESUBEXT
  \NTimeE[sub][sup][ext] = NTIME-EASYSUBEXT
  \NTimeH[sub][sup][ext] = NTIME-HARDSUBEXT
  \NTimeC[sub][sup][ext] = NTIME-COMLETESUBEXT
• \UTime[sub][sup][ext] = UTIMESUBEXT
  \UTimeE[sub][sup][ext] = UTIME-EASYSUBEXT
  \UTimeH[sub][sup][ext] = UTIME-HARDSUBEXT
  \UTimeC[sub][sup][ext] = UTIME-COMLETESUBEXT
• \ATime[sub][sup][ext] = ATIMESUBEXT
  \ATimeE[sub][sup][ext] = ATIME-EASYSUBEXT
  \ATimeH[sub][sup][ext] = ATIME-HARDSUBEXT
  \ATimeC[sub][sup][ext] = ATIME-COMLETESUBEXT

```

```

849 \defcomcls{Time}

```

```

\Space, ...
• \Space[sub][sup][ext] = SPACESUBEXT
  \SpaceE[sub][sup][ext] = SPACE-EASYSUBEXT
  \SpaceH[sub][sup][ext] = SPACE-HARDSUBEXT
  \SpaceC[sub][sup][ext] = SPACE-COMLETESUBEXT

```


- $\text{\AExpSpace[sub][sup][ext]} = \text{AExpSpace}_{\text{SUB}}^{\text{SUP}}\text{EXT}$
- $\text{\AExpSpaceE[sub][sup][ext]} = \text{AExpSpace-EASY}_{\text{SUB}}^{\text{SUP}}\text{EXT}$
- $\text{\AExpSpaceH[sub][sup][ext]} = \text{AExpSpace-HARD}_{\text{SUB}}^{\text{SUP}}\text{EXT}$
- $\text{\AExpSpaceC[sub][sup][ext]} = \text{AExpSpace-COMplete}_{\text{SUB}}^{\text{SUP}}\text{EXT}$

```

856 \def comcls{ExpSpace}

857 %*****%
...

858 \fi
859 %*****%

860 %*****%
861 %** Macros for Games *****%
862 %*****%
863 \ifgam@

864 %** Logic Games *****%
```

```

\SATG, ... ...
865 %% Satisfiability Games
866 \cmdtxttoparname{SATG}{Sat}
867
868 %% Validity Games
869 \cmdtxttoparname{VALG}{Val}
870
871 %% Evaluation Games
872 \cmdtxttoparname{EVLG}{Evl}
873
874 %% Synthesis Games
875 \cmdtxttoparname{SYNG}{Syn}
876
877 %% Model-Checking Games
878 \cmdtxttoparname{MCG}{MC}
879
880 %% Ehrenfeucht-Fraisse Games
881 \cmdtxttoparname{EFG}{EF}

882 %** Syntax *****%
```

```

\PlrSym, \OppSym ...
883 \newcommand{\plrsym}{E}
884 \cmdmthsym{Plr}{\plrsym}
885 \newcommand{\oppsym}{A}
886 \cmdmthsym{Opp}{\oppsym}
```

```

\ArenaName, ... ...
887 \newcommand{\arenaname}{A}
888 \usrmthlatupp{Arena}{Name}{name}{\arenaname}
```

```

\PosSet, ... ...
889 \newcommand{\possym}{v}
890 \newcommand{\posset}{Ps}
891 \cmdmthsetext{Pos}{\posset}{\possym}
892 \cmdmthsymelm{ipos}{\possym_{I}}
893 \cmdmthsymelm{fpos}{\possym_{F}}
894 \cmdmthset{PPos}{\posset_{\PlrSym}}
895 \cmdmthsymelm{ppos}{\possym_{\PlrSym}}
896 \cmdmthset{OPos}{\posset_{\OppSym}}
897 \cmdmthsymelm{opos}{\possym_{\OppSym}}
```

```

\MovRel ...
898 \newcommand{\movrel}{Mv}
899 \cmdmthrel{Mov}{\movrel}
```

```

\GameName, ... ...
    900 \newcommand{\gamename}{\Game}
    901 \usrmthlatupp{Game}{Name}{name}[\gamename]

\WinSet ...
    902 \newcommand{\winset}{\Wn}
    903 \cmdmthset{Win}[\winset]

\ObsSet, \obsFun ...
    904 \newcommand{\obsset}{\Ob}
    905 \cmdmthset{Obs}[\obsset]
    906 \cmdmthfun{obs}

    907 %** Semantics *****%

\PthSet, \pthFun ...
    908 \newcommand{\pthsym}{\pi}
    909 \newcommand{\pthset}{\Pth}
    910 \cmdmthsetext{Pth}[\pthset][\pthsym]
    911 \cmdmthfun{pth}

\HstSet, ... ...
    912 \newcommand{\hstsym}{\rho}
    913 \newcommand{\hstset}{\Hst}
    914 \cmdmthsetext{Hst}[\hstset][\hstsym]
    915 \cmdmthset{PHst}[\hstset_{\PlrSym}]
    916 \cmdmthsymelm{phst}[\hstsym_{\PlrSym}]
    917 \cmdmthset{OHst}[\hstset_{\OppSym}]
    918 \cmdmthsymelm{ohst}[\hstsym_{\OppSym}]
    919 \cmdmthfun{hst}

\PlaySet, \playFun ...
    920 \newcommand{\playsym}{\pi}
    921 \newcommand{\playset}{\Play}
    922 \cmdmthsetext{Play}[\playset][\playsym]
    923 \cmdmthfun{play}

\StrSet, ... ...
    924 \newcommand{\strsym}{\sigma}
    925 \newcommand{\strset}{\Str}
    926 \cmdmthsetext{Str}[\strset][\strsym]
    927 \cmdmthset{PStr}[\strset_{\PlrSym}]
    928 \cmdmthsymelm{pstr}[\strsym_{\PlrSym}]
    929 \cmdmthset{OStr}[\strset_{\OppSym}]
    930 \cmdmthsymelm{ostr}[\strsym_{\OppSym}]

\PrfSet, \prfFun ...
    931 \newcommand{\prfsym}{\xi}
    932 \newcommand{\prfset}{\Prf}
    933 \cmdmthsetext{Prf}[\prfset][\prfsym]

\preFun, \sucFun ...
    934 \newcommand{\prefun}{\pre}
    935 \cmdmthoargfun{pre}[\prefun]
    936 \newcommand{\sucfun}{\suc}
    937 \cmdmthoargfun{suc}[\sucfun]

\escFun, \intFun ...
    938 \newcommand{\escfun}{\esc}
    939 \cmdmthoargfun{esc}[\escfun]
    940 \newcommand{\intfun}{\int}
    941 \cmdmthoargfun{int}[\intfun]

```

```

\atrFun, \rchFun ...
    942 \newcommand{\atrfun}{atr}
    943 \cmdmthoargfun{atr}[\atrfun]
    944 \newcommand{\rchfun}{rch}
    945 \cmdmthoargfun{rch}[\rchfun]

\solFun ...
    946 \newcommand{\solfun}{sol}
    947 \cmdmthoargfun{sol}[\solfun]

    948 %** Qualitative Games on Graph *****%

\BG, ... ...
    949 %% Buchi Games
    950 \cmdtxtoparname{BG}
    951
    952 %% Co-Buchi Games
    953 \cmdtxtoparname{CG}
    954
    955 %% Parity Games
    956 \cmdtxtoparname{PG}
    957
    958 %% Rabin Games
    959 \cmdtxtoparname{RG}
    960
    961 %% Streett Games
    962 \cmdtxtoparname{SG}
    963
    964 %% Muller Games
    965 \cmdtxtoparname{MG}

    966 %** Syntax *****%

\PrtSet, \prtFun ...
    967 \newcommand{\prtsym}{p}
    968 \newcommand{\prtset}{Pr}
    969 \cmdmthsetext{Prt}[\prtset][\prtsym]
    970 \cmdmthfun{prt}[pr]

    971 %** Semantics *****%

    ...

    972 %** Quantitative Games on Graph *****%

\EG, ... ...
    973 %% Energy Games
    974 \cmdtxtoparname{EG}
    975
    976 %% Mean-Payoff Games
    977 \cmdtxtoparname{MPG}
    978
    979 %% Discounted-Payoff Games
    980 \cmdtxtoparname{DPG}

    981 %** Syntax *****%

\WghSet, \wghFun ...
    982 \newcommand{\wghsym}{w}
    983 \newcommand{\wghset}{Wg}
    984 \cmdmthsetext{Wgh}[\wghset][\wghsym]
    985 \cmdmthfun{wgh}[wg]

    986 %** Semantics *****%

```

```

...
987 \fi
988 %*****%
989 %*****%
990 %** Macros for Logics *****%
991 %*****%
992 \iflog@
993 %** Propositional Logics *****%

\BF, \QBF, ... ...
994 % Boolean Formulae
995 \cmdtxttoparname{BF}
996
997 % Quantified Boolean Formulae
998 \DeclareRobustCommand{\QBF}
999   {\txtname{Q}\BF}
1000 \DeclareRobustCommand{\EBF}
1001   {\ensuremath{\exists}\BF}
1002 \DeclareRobustCommand{\UBF}
1003   {\ensuremath{\forall}\BF}

1004 %** Syntax *****%

\LogSig, ... ...
1005 \newcommand{\logsig}{L}
1006 \usrmthlatupp{Log}{Sig}{sig}[\logsig]

\Tt, \Ff ...
1007 \newcommand{\ttsym}{\top}
1008 \usrmth{Tt}{}{sym}[\ttsym]
1009 \newcommand{\ffsym}{\bot}
1010 \usrmth{Ff}{}{sym}[\ffsym]

\APSet, ... ...
1011 \newcommand{\apsym}{p}
1012 \newcommand{\apset}{AP}
1013 \cmdmthsetext{AP}[\apset][\apsym]
1014 \cmdmthfun{ap}\usrmth{ap}{}{argfun}

\sub ...
1015 \usrmth{sub}{}{argfun}

\Cnt, \Qnt ...
1016 \usrmth{Cnt}{}{sym}[C]
1017 \usrmth{Qnt}{}{sym}[Q]

\QAE, \QEA ...
1018 \usrmth{QAE}{}{sym}[\forall\exists]
1019 \usrmth{QEA}{}{sym}[\exists\forall]

\QntSet, ... ...
1020 \newcommand{\qntsym}{\wp}
1021 \newcommand{\qntset}{Qn}
1022 \cmdmthsetext{Qnt}[\qntset][\qntsym]

\free ...
1023 \usrmth{free}{}{argfun}

\dep, \alt ...
1024 \usrmth{dep}{}{argfun}
1025 \usrmth{alt}{}{argfun}

```

```

\pnf, \nnf ...
1026 \cmdtxtabr{pnf}
1027 \cmdtxtabr{nnf}

1028 %** Semantics *****%

\LogStr, ... ...
1029 \newcommand{\logstr}{L}
1030 \usrmthlatupp{Log}{Str}{str}[\logstr]

\ValSet, ... ...
1031 \newcommand{\valsym}{\xi}
1032 \newcommand{\valset}{Val}
1033 \cmdmthsetext{Val}[\valset][\valsym]

\AsgSet, ... ...
1034 \newcommand{\asgsym}{\chi}
1035 \newcommand{\asgset}{Asg}
1036 \cmdmthsetext{Asg}[\asgset][\asgsym]

1037 %** First-Order Logics I *****%

\FOL, ... ...
1038 % First-Order Logic
1039 \cmdtxtoparname{FOL}[Fol]
1040
1041 % Monadic First-Order Logic
1042 \DeclareRobustCommand{\MFOL}
1043 {\{\txtname{M}\}\FOL}

1044 %** Syntax *****%

\VarSig, ... ...
1045 \newcommand{\varsig}{V}
1046 \usrmthlatupp{Var}{Sig}{sig}[\varsig]
1047 \newcommand{\varsym}{x}
1048 \newcommand{\varset}{Vr}
1049 \cmdmthsetext{Var}[\varset][\varsym]
1050 \usrmth{var}{-}{argfun}[vr]
1051 \cmdmthfun{dim}[dm]\usrmth{dim}{-}{argfun}[dm]

\ConSig, ... ...
1052 \newcommand{\consig}{C}
1053 \usrmthlatupp{Con}{Sig}{sig}[\consig]
1054 \newcommand{\consym}{c}
1055 \newcommand{\conset}{Cn}
1056 \cmdmthsetext{Con}[\conset][\consym]
1057 \usrmth{con}{-}{argfun}[cn]

\FunSig, ... ...
1058 \newcommand{\funsig}{F}
1059 \usrmthlatupp{Fun}{Sig}{sig}[\funsig]
1060 \newcommand{\funsym}{f}
1061 \newcommand{\funset}{Fn}
1062 \cmdmthsetext{Fun}[\funset][\funsym]
1063 \usrmth{fun}{-}{argfun}[fn]
1064 \cmdmthfun{art}[ar]\usrmth{art}{-}{argfun}[ar]

\TerSig, ... ...
1065 \newcommand{\tersig}{T}
1066 \usrmthlatupp{Ter}{Sig}{sig}[\tersig]
1067 \newcommand{\tersym}{t}
1068 \newcommand{\terset}{Tr}
1069 \cmdmthsetext{Ter}[\terset][\tersym]
1070 \usrmth{ter}{-}{argfun}

```

```

\RelSig, ... ...
1071 \newcommand{\relsig}{R}
1072 \usrmthlatupp{Rel}{Sig}{sig}[\relsig]
1073 \newcommand{\relsym}{r}
1074 \newcommand{\relset}{Rl}
1075 \cmdmthsetext{Rel}[\relset][\relsym]
1076 \usrmth{rel}{}{argfun}[rl]

\skm ...
1077 \usrmth{skm}{}{argfun}

1078 %** Semantics *****%%

\ConStr, ... ...
1079 \newcommand{\constr}{C}
1080 \usrmthlatupp{Con}{Str}{str}[\constr]

\FunStr, ... ...
1081 \newcommand{\funstr}{F}
1082 \usrmthlatupp{Fun}{Str}{str}[\funstr]

\TerStr, ... ...
1083 \newcommand{\terstr}{T}
1084 \usrmthlatupp{Ter}{Str}{str}[\terstr]

\RelStr, ... ...
1085 \newcommand{\relstr}{R}
1086 \usrmthlatupp{Rel}{Str}{str}[\relstr]

1087 %** First-Order Logics II *****%%

\IF, ... ...
1088 % Independence-Friendly Logic
1089 \cmdtxtoparname{IF}

...

1090 %** Syntax *****%%

...

1091 %** Semantics *****%%

...

1092 %** Second-Order Logics I *****%%

\SOL, ... ...
1093 % Second-Order Logic
1094 \cmdtxtoparname{SOL}[Sol]
1095
1096 % Monadic Second-Order Logic
1097 \DeclareRobustCommand{\MSOL}
1098   {\{\txtname{M}\}\SOL}

1099 %** Syntax *****%%

\FVarSet, ... ...
1100 \newcommand{\fvarsym}{x}
1101 \newcommand{\fvarset}{FVr}
1102 \cmdmthsetext{FVar}[\fvarset][\fvarsym]

\SVarSet, ... ...
1103 \newcommand{\svarsym}{X}
1104 \newcommand{\svarset}{SVr}
1105 \cmdmthsetext{SVar}[\svarset][\svarsym]

```

```

1106 %** Semantics *****%%
...
1107 %** Second-Order Logics II *****%%

\TL, \PL, ... ...
1108 % Tree Logic
1109 \cmdtxttoparname{TL}
1110
1111 % Monadic Tree Logic
1112 \DeclareRobustCommand{\MTL}
1113   {\txtname{M}}\TL}
1114
1115 % Path Logic
1116 \cmdtxttoparname{PL}
1117
1118 % Monadic Path Logic
1119 \DeclareRobustCommand{\MPL}
1120   {\txtname{M}}\PL}

1121 %** Syntax *****%%
...
1122 %** Semantics *****%%
...
1123 %** Modal Logics I *****%%

\ML, \QML, ... ...
1124 % Modal Logic
1125 \cmdtxttoparname{ML}
1126
1127 % Quantified Modal Logic
1128 \DeclareRobustCommand{\QML}
1129   {\txtname{Q}}\ML}
1130 \DeclareRobustCommand{\EML}
1131   {\ensuremath{\exists}\ML}
1132 \DeclareRobustCommand{\UML}
1133   {\ensuremath{\forall}\ML}

1134 %** Syntax *****%%

\Opr ...
1135 \usrmth{Opr}{\sym}[O]

\DMod, \BMod ...
1136 \usrmth{DMod}{\sym}[\Diamond]
1137 \usrmth{BMod}{\sym}[\Box]

\Exs, \All ...
1138 \DeclareRobustCommand{\Exs}[1]
1139   {\mth{\defval{\argmid{\langle}{#1}{\rangle}}{\DMod}}}
1140 \DeclareRobustCommand{\All}[1]
1141   {\mth{\defval{\argmid{\left[]{\#1}{\right]}}{\BMod}}}

1142 %** Semantics *****%%

\KrpStr, ... ...
1143 \newcommand{\krpstr}{K}
1144 \usrmthlatupp{Krp}{Str}{str}[\krpstr]

```

```

\WrlSet, ... ...
1145 \newcommand{\wrlsym}{w}
1146 \newcommand{\wrlset}{W}
1147 \cmdmthsetext{Wrl}[\wrlset][\wrlsym]
1148 \cmdmthsymelm{iwrl}[\wrlsym_{I}]

\AccRel, \TrnRel ...
1149 \newcommand{\accsym}{R}
1150 \cmdmthrel{Acc}[\accsym]
1151 \cmdmthrel{Trn}[\accsym]

\labFun ...
1152 \newcommand{\labsym}{\lambda}
1153 \cmdmthfun{lab}[\labsym]

\PthSet, \pthFun ...
1154 \providecommand{\pthsym}{\pi}
1155 \providecommand{\pthset}{Pth}
1156 \cmdmthsetext{Pth}[\pthset][\pthsym]
1157 \cmdmthfun{pth}

1158 %** Modal Logics II *****%%

\MC, \QMC, ... ...
1159 % Mu Calculus
1160 \cmdtxttoparname{MC}[\ensuremath{\mu}-Calculus]
1161
1162 % Quantified Modal Logic
1163 \DeclareRobustCommand{\QMC}
1164   {\{\textrmname{Q}\}\MC}
1165 \DeclareRobustCommand{\EMC}
1166   {\ensuremath{\exists}\MC}
1167 \DeclareRobustCommand{\UMC}
1168   {\ensuremath{\forall}\MC}

1169 %** Syntax *****%%
...
1170 %** Semantics *****%%
...
1171 %** Temporal Logics I *****%%

\PTL, \LTL, ... ...
1172 % Propositional Temporal Logic
1173 \cmdtxttoparname{PTL}
1174
1175 % Quantified Propositional Temporal Logic
1176 \DeclareRobustCommand{\QPTL}
1177   {\{\textrmname{Q}\}\PTL}
1178 \DeclareRobustCommand{\EPTL}
1179   {\ensuremath{\exists}\PTL}
1180 \DeclareRobustCommand{\UPTL}
1181   {\ensuremath{\forall}\PTL}
1182
1183 % Linear Temporal Logic
1184 \cmdtxttoparname{LTL}
1185
1186 % Quantified Linear Temporal Logic
1187 \DeclareRobustCommand{\QLTL}
1188   {\{\textrmname{Q}\}\LTL}
1189 \DeclareRobustCommand{\ELTL}
1190   {\ensuremath{\exists}\LTL}
1191 \DeclareRobustCommand{\ULTL}
1192   {\ensuremath{\forall}\LTL}

```


1193 %%** Syntax *****%%

\X,

1194 \usrmth{X}{-}{sym}
 1195 \usrmth{F}{-}{sym}
 1196 \usrmth{G}{-}{sym}
 1197 \usrmth{U}{-}{sym}
 1198 \usrmth{R}{-}{sym}

\Y,

1199 \usrmth{Y}{-}{sym}
 1200 \usrmth{P}{-}{sym}\let\SavePildcrow\P
 1201 \usrmth{H}{-}{sym}\let\SaveDoubleAcute\H
 1202 \usrmth{S}{-}{sym}\let\SaveSectionSymbol\S
 1203 \usrmth{B}{-}{sym}

1204 %%** Semantics *****%%

...

1205 %%** Temporal Logics II *****%%

\PDL, \CTL,

1206
 1207 % Propositional Dynamic Logic
 1208 \cmdtxtopname{PDL}
 1209
 1210 % Computation Tree Logic
 1211 \cmdtxtopname{CTL}
 1212
 1213 % Quantified Computation Tree Logic
 1214 \DeclareRobustCommand{\QCTL}
 1215 {\txtname{Q}}\CTL
 1216 \DeclareRobustCommand{\ECTL}
 1217 {\ensuremath{\exists}}\CTL
 1218 \DeclareRobustCommand{\UCTL}
 1219 {\ensuremath{\forall}}\CTL
 1220
 1221 % Improved Computation Tree Logic
 1222 \cmdtxtopname{CTLP}[CTL\$^{+}\$]
 1223
 1224 % Quantified Improved Computation Tree Logic
 1225 \DeclareRobustCommand{\QCTLP}
 1226 {\txtname{Q}}\CTLP
 1227 \DeclareRobustCommand{\ECTLP}
 1228 {\ensuremath{\exists}}\CTLP
 1229 \DeclareRobustCommand{\UCTLP}
 1230 {\ensuremath{\forall}}\CTLP
 1231
 1232 % Full Computation Tree Logic
 1233 \cmdtxtopname{CTLS}[CTL*]
 1234
 1235 % Quantified Full Computation Tree Logic
 1236 \DeclareRobustCommand{\QCTLS}
 1237 {\txtname{Q}}\CTLS
 1238 \DeclareRobustCommand{\ECTLS}
 1239 {\ensuremath{\exists}}\CTLS
 1240 \DeclareRobustCommand{\UCTLS}
 1241 {\ensuremath{\forall}}\CTLS

1242 %%** Syntax *****%%

\E, \A ...

1243 \usrmth{E}{-}{sym}
 1244 \usrmth{A}{-}{sym}

```

1245 %** Semantics *****%
...
1246 %** Strategic Logics I *****%

\ATL, ... ...
1247 % Alternating Temporal Logic
1248 \cmdtxtopname{ATL}
1249
1250 % Quantified Alternating Temporal Logic
1251 \DeclareRobustCommand{\QATL}
1252   {\txtname{Q}\ATL}
1253 \DeclareRobustCommand{\EATL}
1254   {\ensuremath{\exists}\ATL}
1255 \DeclareRobustCommand{\UATL}
1256   {\ensuremath{\forall}\ATL}
1257
1258 % Improved Alternating Temporal Logic
1259 \cmdtxtopname{ATLP}[ATL$^{+}$]
1260
1261 % Quantified Improved Alternating Temporal Logic
1262 \DeclareRobustCommand{\QATLP}
1263   {\txtname{Q}\ATLP}
1264 \DeclareRobustCommand{\EATLP}
1265   {\ensuremath{\exists}\ATLP}
1266 \DeclareRobustCommand{\UATLP}
1267   {\ensuremath{\forall}\ATLP}
1268
1269 % Full Alternating Temporal Logic
1270 \cmdtxtopname{ATLS}[ATL*]
1271
1272 % Quantified Full Alternating Temporal Logic
1273 \DeclareRobustCommand{\QATLS}
1274   {\txtname{Q}\ATLS}
1275 \DeclareRobustCommand{\EATLS}
1276   {\ensuremath{\exists}\ATLS}
1277 \DeclareRobustCommand{\UATLS}
1278   {\ensuremath{\forall}\ATLS}

1279 %** Syntax *****%

\EExs, \AA11 ...
1280 \DeclareRobustCommand{\EExs}[1]
1281   {\mth{\argmid{\langle!\rangle}{\defval{#1}{\emptyset}}{\rangle!\rangle}}
1282 \DeclareRobustCommand{\AA11}[1]
1283   {\mth{\argmid{\left[\left[\defval{#1}{\emptyset}]{\right]\right]}}}

1284 %** Semantics *****%

\CGS ...
1285 \cmdtxtname{CGS}

\CGSStr, ... ...
1286 \newcommand{\cgsstr}{G}
1287 \usrmthlatupp{CGS}{Str}{str}[\cgsstr]

\AgnSet, ... ...
1288 \newcommand{\agnsym}{a}
1289 \newcommand{\agnset}{Ag}
1290 \cmdmthsetext{Agn}[\agnset][agnsym]

\PosSet, ... ...
1291 \providecommand{\possym}{v}

```

```

1292 \providecommand{\posset}{Ps}
1293 \cmdmthsettext{Pos}{\posset}[\possym]
1294 \cmdmthsymelm{ipos}{\possym_{I}}
1295 \cmdmthsymelm{fpos}{\possym_{F}}
1296 \cmdmthset{PPos}{\posset_{\PlrSym}}
1297 \cmdmthsymelm{ppos}{\possym_{\PlrSym}}
1298 \cmdmthset{OPos}{\posset_{\OppSym}}
1299 \cmdmthsymelm{opos}{\possym_{\OppSym}}

\SttSet, ... ...
1300 \newcommand{\sttsym}{s}
1301 \newcommand{\sttset}{St}
1302 \cmdmthsettext{Stt}{\sttset}[\sttsym]
1303 \cmdmthset{IStt}{\sttset_{I}}
1304 \cmdmthsymelm{istt}{\sttsym_{I}}
1305 \cmdmthset{FStt}{\sttset_{F}}
1306 \cmdmthsymelm{fstt}{\sttsym_{F}}

\ActSet, ... ...
1307 \newcommand{\actsym}{c}
1308 \newcommand{\actset}{Ac}
1309 \cmdmthsettext{Act}{\actset}[\actsym]

\DecSet, ... ...
1310 \newcommand{\decsym}{d}
1311 \newcommand{\decset}{Dc}
1312 \cmdmthsettext{Dec}{\decset}[\decsym]

\movFun ...
1313 \newcommand{\movsym}{\tau}
1314 \cmdmthfun{mov}{\movsym}

\HstSet, ... ...
1315 \providecommand{\hstsym}{\rho}
1316 \providecommand{\hstset}{Hst}
1317 \cmdmthsettext{Hst}{\hstset}[\hstsym]
1318 \cmdmthset{PHst}{\hstset_{\PlrSym}}
1319 \cmdmthsymelm{phst}{\hstsym_{\PlrSym}}
1320 \cmdmthset{OHst}{\hstset_{\OppSym}}
1321 \cmdmthsymelm{ohst}{\hstsym_{\OppSym}}
1322 \cmdmthfun{hst}

\PlaySet, \playFun ...
1323 \providecommand{\playsym}{\pi}
1324 \providecommand{\playset}{Play}
1325 \cmdmthsettext{Play}{\playset}[\playsym]
1326 \cmdmthfun{play}

\StrSet, ... ...
1327 \providecommand{\strsym}{\sigma}
1328 \providecommand{\strset}{Str}
1329 \cmdmthsettext{Str}{\strset}[\strsym]
1330 \cmdmthset{PStr}{\strset_{\PlrSym}}
1331 \cmdmthsymelm{pstr}{\strsym_{\PlrSym}}
1332 \cmdmthset{OStr}{\strset_{\OppSym}}
1333 \cmdmthsymelm{ostr}{\strsym_{\OppSym}}

\PrfSet, \prfFun ...
1334 \providecommand{\prfsym}{\xi}
1335 \providecommand{\prfset}{Prf}
1336 \cmdmthsettext{Prf}{\prfset}[\prfsym]

1337 %%** Strategic Logics II *****%%

```

```

\SL, ... ...
1338 % Strategy Logic
1339 \cmdtxttoparname{SL}
1340
1341 \DeclareRobustCommand{\ESL}
1342   {\ensuremath{\exists}\SL}
1343 \DeclareRobustCommand{\USL}
1344   {\ensuremath{\forall}\SL}
1345
1346 \DeclareRobustCommand{\FSL}
1347   {\{\textrmname{F}\}\SL}
1348
1349 \DeclareRobustCommand{\EFSL}
1350   {\ensuremath{\exists}\FSL}
1351 \DeclareRobustCommand{\UFSL}
1352   {\ensuremath{\forall}\FSL}
1353
1354 % One-Goal Strategy Logic
1355 \DeclareRobustCommandx{\OGSL}[3][1=, 2=, 3=]
1356   {\SL[#1][#2][lg\arglef{,}{#3}]}
1357
1358 \DeclareRobustCommand{\EOGSL}
1359   {\ensuremath{\exists}\OGSL}
1360 \DeclareRobustCommand{\UOGSL}
1361   {\ensuremath{\forall}\OGSL}
1362
1363 \DeclareRobustCommand{\FOGSL}
1364   {\{\textrmname{F}\}\OGSL}
1365
1366 \DeclareRobustCommand{\EFOGSL}
1367   {\ensuremath{\exists}\FOGSL}
1368 \DeclareRobustCommand{\UFOGSL}
1369   {\ensuremath{\forall}\FOGSL}
1370
1371 % Conjunctive-Goal Strategy Logic
1372 \DeclareRobustCommandx{\CGSL}[3][1=, 2=, 3=]
1373   {\SL[#1][#2][cg\arglef{,}{#3}]}
1374
1375 \DeclareRobustCommand{\ECGSL}
1376   {\ensuremath{\exists}\CGSL}
1377 \DeclareRobustCommand{\UCGSL}
1378   {\ensuremath{\forall}\CGSL}
1379
1380 \DeclareRobustCommand{\FCGSL}
1381   {\{\textrmname{F}\}\CGSL}
1382
1383 \DeclareRobustCommand{\EFCGSL}
1384   {\ensuremath{\exists}\FCGSL}
1385 \DeclareRobustCommand{\UFCGSL}
1386   {\ensuremath{\forall}\FCGSL}
1387
1388 % Disjunctive-Goal Strategy Logic
1389 \DeclareRobustCommandx{\DGSL}[3][1=, 2=, 3=]
1390   {\SL[#1][#2][dg\arglef{,}{#3}]}
1391
1392 \DeclareRobustCommand{\EDGSL}
1393   {\ensuremath{\exists}\DGSL}
1394 \DeclareRobustCommand{\UDGSL}
1395   {\ensuremath{\forall}\DGSL}
1396
1397 \DeclareRobustCommand{\FDGSL}
1398   {\{\textrmname{F}\}\DGSL}
1399

```

```

1400 \DeclareRobustCommand{\EFDGSL}
1401   {\ensuremath{\exists}\FDGSL}
1402 \DeclareRobustCommand{\UFDGSL}
1403   {\ensuremath{\forall}\FDGSL}
1404
1405 % Alternating-Goal Strategy Logic
1406 \DeclareRobustCommandx{\AGSL}[3][1=, 2=, 3=]
1407   {\SL[#1][#2][ag\arglef{,}{#3}]}
1408
1409 \DeclareRobustCommand{\EAGSL}
1410   {\ensuremath{\exists}\AGSL}
1411 \DeclareRobustCommand{\UAGSL}
1412   {\ensuremath{\forall}\AGSL}
1413
1414 \DeclareRobustCommand{\FAGSL}
1415   {\{\txtname{F}\}\xGSL}
1416
1417 \DeclareRobustCommand{\EFAGSL}
1418   {\ensuremath{\exists}\FAGSL}
1419 \DeclareRobustCommand{\UFAGSL}
1420   {\ensuremath{\forall}\FAGSL}
1421
1422 % Extended-Goal Strategy Logic
1423 \DeclareRobustCommandx{\EGSL}[3][1=, 2=, 3=]
1424   {\SL[#1][#2][eg\arglef{,}{#3}]}
1425
1426 \DeclareRobustCommand{\EEGSL}
1427   {\ensuremath{\exists}\EGSL}
1428 \DeclareRobustCommand{\UEGSL}
1429   {\ensuremath{\forall}\EGSL}
1430
1431 \DeclareRobustCommand{\FEGSL}
1432   {\{\txtname{F}\}\xGSL}
1433
1434 \DeclareRobustCommand{\EFEGSL}
1435   {\ensuremath{\exists}\FEGSL}
1436 \DeclareRobustCommand{\UFEGSL}
1437   {\ensuremath{\forall}\FEGSL}
1438
1439 % Boolean-Goal Strategy Logic
1440 \DeclareRobustCommandx{\BGSL}[3][1=, 2=, 3=]
1441   {\SL[#1][#2][bg\arglef{,}{#3}]}
1442
1443 \DeclareRobustCommand{\EBGSL}
1444   {\ensuremath{\exists}\BGSL}
1445 \DeclareRobustCommand{\UBGSL}
1446   {\ensuremath{\forall}\BGSL}
1447
1448 \DeclareRobustCommand{\FBGSL}
1449   {\{\txtname{F}\}\xGSL}
1450
1451 \DeclareRobustCommand{\EFBGSL}
1452   {\ensuremath{\exists}\FBGSL}
1453 \DeclareRobustCommand{\UFBGSL}
1454   {\ensuremath{\forall}\FBGSL}
1455
1456 % Nested-Goal Strategy Logic
1457 \DeclareRobustCommandx{\NGSL}[3][1=, 2=, 3=]
1458   {\SL[#1][#2][ng\arglef{,}{#3}]}
1459
1460 \DeclareRobustCommand{\ENGSL}
1461   {\ensuremath{\exists}\NGSL}
1462 \DeclareRobustCommand{\UNGSL}

```

```

1463   {\ensuremath{\forall}\text{forall}}\NGSL}
1464
1465 \DeclareRobustCommand{\FNGSL}
1466   {\{\textname{F}\}\xGSL}
1467
1468 \DeclareRobustCommand{\EFNGSL}
1469   {\ensuremath{\exists}\text{exists}}\FNGSL}
1470 \DeclareRobustCommand{\UFNGSL}
1471   {\ensuremath{\forall}\text{forall}}\FNGSL}
1472
1473 % Undefined-Goal Strategy Logic
1474 \DeclareRobustCommandx{\XGSL}[3][1=, 2=, 3=]
1475   {\SL[#1][#2][xg\argleft{,}{#3}]}
1476
1477 \DeclareRobustCommand{\EXGSL}
1478   {\ensuremath{\exists}\text{exists}}\XGSL}
1479 \DeclareRobustCommand{\UXGSL}
1480   {\ensuremath{\forall}\text{forall}}\XGSL}
1481
1482 \DeclareRobustCommand{\FXGSL}
1483   {\{\textname{F}\}\xGSL}
1484
1485 \DeclareRobustCommand{\EFXGSL}
1486   {\ensuremath{\exists}\text{exists}}\FXGSL}
1487 \DeclareRobustCommand{\UFXGSL}
1488   {\ensuremath{\forall}\text{forall}}\FXGSL}
1489 %** Syntax *****%%

\BndSet, ... ..
1490 \newcommand{\bndsym}{\flat}
1491 \newcommand{\bndset}{\Bn}
1492 \cmdmthsetext{\Bnd}{\bndset}{\bndsym}
1493 \usrmth{\bnd}{-}{argfun}

\psn ...
1494 \usrmth{\psn}{-}{argfun}

1495 %** Semantics *****%%

\nxtFun ...
1496 \newcommand{\nxtfun}{\nxt}
1497 \cmdmthfun{\nxt}{\nxtfun}

1498 \fi
1499 %*****%%

1500 %*****%%
1501 %** Macros for Automata *****%%
1502 %*****%%
1503 \ifaut@

1504 %** Finite Word Automata *****%%

\DWA, ... ..
1505 \cmdtxtoparname{DWA}\cmdtxtoparname{NWA}\cmdtxtoparname{UWA}\cmdtxtoparname{AWA}
1506
1507 \cmdtxtoparname{DFW}\cmdtxtoparname{NFW}\cmdtxtoparname{UFW}\cmdtxtoparname{AFW}
1508 \cmdtxtoparname{DBW}\cmdtxtoparname{NBW}\cmdtxtoparname{UBW}\cmdtxtoparname{ABW}
1509 \cmdtxtoparname{DCW}\cmdtxtoparname{NCW}\cmdtxtoparname{UCW}\cmdtxtoparname{ACW}
1510 \cmdtxtoparname{DPW}\cmdtxtoparname{NPW}\cmdtxtoparname{UPW}\cmdtxtoparname{APW}
1511 \cmdtxtoparname{DRW}\cmdtxtoparname{NRW}\cmdtxtoparname{URW}\cmdtxtoparname{ARW}
1512 \cmdtxtoparname{DSW}\cmdtxtoparname{NSW}\cmdtxtoparname{USW}\cmdtxtoparname{ASW}
1513 \cmdtxtoparname{DMW}\cmdtxtoparname{NMW}\cmdtxtoparname{UMW}\cmdtxtoparname{AMW}

```

```

\GFG, \PD, ... ...
1514 \cmdttxtoparname{GFG}
1515
1516 \cmdttxtoparname{PD}
1517
1518 %% ...

1519 %** Syntax *****%

\AutName, ... ...
1520 \newcommand{\autname}{A}
1521 \usrmthlatupp{Aut}{Name}{name}[\autname]
1522 \newcommand{\autset}{Aut}
1523 \cmdmthset{Aut}[\autset]

\WAutSet ...
1524 \newcommand{\wautset}{WAut}
1525 \cmdmthset{WAut}[\wautset]

\SttSet, ... ...
1526 \def\sttsym{q}
1527 \def\sttset{Q}
1528 \cmdmthsetext{Stt}[\sttset][\sttsym]
1529 \cmdmthset{IStt}[\sttset_{I}]
1530 \cmdmthsymelm{istt}[\sttsym_{I}]
1531 \cmdmthset{FStt}[\sttset_{F}]
1532 \cmdmthsymelm{fstt}[\sttsym_{F}]

\SymSet, ... ...
1533 \newcommand{\symsym}{\sigma}
1534 \newcommand{\symset}{\Sigma}
1535 \cmdmthsetext{Sym}[\symset][\symsym]

\trnFun ...
1536 \newcommand{\trnsym}{\delta}
1537 \cmdmthfun{trn}[\trnsym]

1538 %** Semantics *****%

\LangFun ...
1539 \newcommand{\langfun}{L}
1540 \cmdmthfun{Lang}[\langfun]

\WrdSet, ... ...
1541 \newcommand{\wrdsym}{w}
1542 \newcommand{\wrdset}{Wr}
1543 \cmdmthsetext{Wrd}[\wrdset][\wrdsym]

1544 %** Finite Tree Automata *****%

\DTA, ... ...
1545 \cmdttxtoparname{DTA}\cmdttxtoparname{NTA}\cmdttxtoparname{UTA}\cmdttxtoparname{ATA}
1546
1547 \cmdttxtoparname{DFT}\cmdttxtoparname{NFT}\cmdttxtoparname{UFT}\cmdttxtoparname{AFT}
1548 \cmdttxtoparname{DBT}\cmdttxtoparname{NBT}\cmdttxtoparname{UBT}\cmdttxtoparname{ABT}
1549 \cmdttxtoparname{DCT}\cmdttxtoparname{NCT}\cmdttxtoparname{UCT}\cmdttxtoparname{ACT}
1550 \cmdttxtoparname{DPT}\cmdttxtoparname{NPT}\cmdttxtoparname{UPT}\cmdttxtoparname{APT}
1551 \cmdttxtoparname{DRT}\cmdttxtoparname{NRT}\cmdttxtoparname{URT}\cmdttxtoparname{ART}
1552 \cmdttxtoparname{DST}\cmdttxtoparname{NST}\cmdttxtoparname{UST}\cmdttxtoparname{AST}
1553 \cmdttxtoparname{DMT}\cmdttxtoparname{NMT}\cmdttxtoparname{UMT}\cmdttxtoparname{AMT}

1554 %** Syntax *****%

```

```

\TautSet ...
1555 \newcommand{\tautset}{TAut}
1556 \cmdmthset{TAut}[\tautset]

\DirSet, ... ...
1557 \newcommand{\dirsym}{d}
1558 \newcommand{\dirset}{\Lambda}
1559 \cmdmthsettext{Dir}[\dirset][\dirsym]

1560 %** Semantics *****%%

\TreeSet, ... ...
1561 \newcommand{\treesym}{T}
1562 \newcommand{\treeset}{Tr}
1563 \cmdmthsettext{Tree}[\treeset][\treesym]

\wotFun ...
1564 \newcommand{\wotfun}{wot}
1565 \cmdmthfun{wot}[\wotfun]

1566 \fi
1567 %*****%%
1568 %*****%%
1569 %** Format Tricks *****%%
1570 %*****%%
1571 \iffirm@

... ...
1572 %...

1573 \fi
1574 %*****%%
1575 %*****%%
1576 %** Figure Tricks *****%%
1577 %*****%%
1578 \iffig@

... ...
1579 %...

1580 \fi
1581 %*****%%
1582 %*****%%
1583 %** Table Tricks *****%%
1584 %*****%%
1585 \iftab@

... ...
1586 %...

1587 \fi
1588 %*****%%
1589 %*****%%
1590 %** Algorithm Tricks *****%%
1591 %*****%%
1592 \ifalg@

1593 \RequirePackage[ruled,vlined]{algorithm2e}
1594 \setlength{\algomargin}{1.25em}
1595 \DontPrintSemicolon

\Signature ...
1596 \SetKw{Signature}{signature}

```



```

\Macro, ... ...
1597 \SetKwFor{Macro}{macro}{}{}
1598 \SetKwFor{Function}{function}{}{}
1599 \SetKwFor{Procedure}{procedure}{}{}

\Let ...
1600 \SetKwFor{Let}{let}{in}{}

\True, \False ...
1601 \SetKw{True}{true}
1602 \SetKw{False}{false}

\GoTo, ... ...
1603 \SetKw{GoTo}{goto}
1604 \SetKw{Break}{break}
1605 \SetKw{Continue}{continue}

\MIf, ... ...
1606 \SetKwIF{MIf}{MElseIf}{MElse}{\#if}{\#then}{\#else \#if}{\#else}{\#endif}

\nlr ...
1607 \DeclareRobustCommand{\nlr}[1]
1608   {\addtocounter{AlgoLine}{1}%
1609   \nlset{\arabic{AlgoLine}-\addtocounter{AlgoLine}{#1}\arabic{AlgoLine}}}

1610 \fi
1611 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1612 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1613 %** Auxiliary Tricks %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1614 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1615 \ifaux@
1616
1617 \RequirePackage[final]{microtype}
1618
1619 %...
1620
1621 \ifenmtls@
1622   % Enumeration Tools
1623   \RequirePackage{paralist}
1624 \fi
1625
1626 \ifthmtls@
1627   % Theorem Tools
1628   \RequirePackage{thmtools, thm-restate}
1629 \fi
1630
1631 \ifhympref@
1632   % Hyper References
1633   \RequirePackage{hyperref}
1634 \fi
1635
1636 \ifcrv@
1637   % Camera-Ready Version
1638
1639   %...
1640
1641 \else
1642   % Draft Version
1643
1644   %...
1645
1646   \ifchgbar@

```

```

1647 % Change Bars
1648 \RequirePackage{changebar}
1649 \fi
1650
1651 \iflignum@
1652 % Line Numbers
1653 \if@twocolumn
1654 \RequirePackage[switch, columnwise, mathlines]{lineno}
1655 \else
1656 \RequirePackage[columnwise, mathlines]{lineno}
1657 \if
1658 \linenumbers
1659 \fi
1660
1661 %%. . .
1662
1663 \fi
1664
1665 \fi
1666 %%*****%
1667 \endinput
1668 \end{package}

```

2 Change History

v0.0		v0.2	
General: First public release	1	General: Changes in auxiliary tricks	1
v0.1			
General: Algorithm tricks	1		

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