The `latex-lab-mathpkg` code*

LaTeX Project

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Abstract

Contents

1 Introduction **1**

2 The Implementation **1**

2.1 File declaration 1
2.2 breqn 1
2.3 cases 2
2.4 bm 2
2.5 amsmath timing 2

Index **3**

1 Introduction

This file implements adaptions to various math packages needed for the tagging project.

2 The Implementation

```
1 ⟨@@=math⟩

2 ⟨*kernel⟩
```

2.1 File declaration

```
3 \ProvidesFile{latex-lab-mathpkg.ltx}
4         [2026-05-11 v0.1e mathpkg adaptions]
```

*

2.2 breqn

```
\AddToHook{package/breqn/after}{
   \RegisterMathEnvironment{dmath}
   \RegisterMathEnvironment{dgroup*}
   \AddToHook{env/dmath/begin}{\tagpdfparaOff}
   \AddToHook{env/dgroup*/begin}{\tagpdfparaOff}
}
```

2.3 cases

Force loading of amsmath before cases.

```
\AddToHook{package/cases/before}{\RequirePackage{amsmath}}
\AddToHook{package/cases/after}{
  \RegisterMathEnvironment{subnumcases}
}
```

2.4 bm

Similar to the amsbsy code in latex-lab-amsmath for \pmb we need to mark up copies as artifact (with mathml-SE this probably has the same problem as \pmb):

```
\ExplSyntaxOn
\cs_new:Npn\__math_patch_bm_pmb:
 {
   \NewTaggingSocket{bm/pmb}{2}
   \NewTaggingSocketPlug{bm/pmb}{default}
    {
      \tag_mc_end:\tag_mc_begin:n{artifact}
      \tag_mc_reset_box:N##1
      ##2
      \tag_mc_end:
      \tag_mc_begin:n{}
    }
   \AssignTaggingSocketPlug{bm/pmb}{default}
   \def\bm@pmb@@##1##2##3{{%
     \hbox_set:Nn\l__math_tmpa_box{$\m@th##1##3$}%
     \dimen@##2\wd\tw@
     \rlap{\box_use:N\l__math_tmpa_box}%
     \UseTaggingSocket{bm/pmb}{\l__math_tmpa_box}
      {
        \kern\dimen@
        \raise1.5\dimen@\rlap{\box_use:N\l__math_tmpa_box}%
        \kern\dimen@
        \box_use_drop:N\l__math_tmpa_box
      }}}
   }
\AddToHook{package/bm/after}
 { \__math_patch_bm_pmb: }
\ExplSyntaxOff
```

2.5 amsmath timing

These packages error or lose their function if loaded before amsmath.

```
\AddToHook{package/accents/before}{\RequirePackage{amsmath}}
\AddToHook{package/cleveref/before}{\RequirePackage{amsmath}}
\AddToHook{package/esint/before}{\RequirePackage{amsmath}}
\AddToHook{package/grmath/before}{\RequirePackage{amsmath}}
\AddToHook{package/mathabx/before}{\RequirePackage{amsmath}}
\AddToHook{package/wasysym/before}{\RequirePackage{amsmath}}
```

⟨/kernel⟩

Index

The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

A

\AddToHook 5, 8, 9, 11, 12, 40, 43, 44, 45, 46, 47, 48
\AssignTaggingSocketPlug 27

B

box commands:
\box_use:N 31, 35
\box_use_drop:N 37
box internal commands:
\l__math_tmpa_box . . 29, 31, 32, 35, 37

C

cs commands:
\cs_new:Npn 16

D

\def 28

E

\ExplSyntaxOff 42
\ExplSyntaxOn 15

H

hbox commands:
\hbox_set:Nn 29

K

\kern 34, 36

M

math internal commands:
__math_patch_bm_pmb: 16, 41

N

\NewTaggingSocket 18
\NewTaggingSocketPlug 19

P

\pmb *2*
\ProvidesFile 3

R

\raise 35
\RegisterMathEnvironment 6, 7, 13
\RequirePackage . 11, 43, 44, 45, 46, 47, 48
\rlap 31, 35

T

tag commands:
\tag_mc_begin:n 21, 25
\tag_mc_end: 21, 24
\tag_mc_reset_box:N 22
\tagpdfparaOff 8, 9
TEX and LATEX 2ε commands:
\bm@pmb@@ 28
\dimen@ 30, 34, 35, 36
\m@th 29
\tw@ 30

U

\UseTaggingSocket 32

W

\wd 30