

The latex-lab-mathpkg code^{*}

L^AT_EX Project

January 25, 2026

Abstract

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1 Introduction

This file implements adaption 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 `[2026-01-16 v0.1c mathpkg adaption]`

*

2.2 breqn

```
5 \AddToHook{package/breqn/after}{  
6   \RegisterMathEnvironment{dmath}  
7   \RegisterMathEnvironment{dgroup*}  
8   \AddToHook{env/dmath/begin}{\tagpdfparaOff}  
9   \AddToHook{env/dgroup*/begin}{\tagpdfparaOff}  
10 }
```

2.3 cases

Force loading of amsmath before cases.

```
11 \AddToHook{package/cases/before}{\RequirePackage{amsmath}}  
12 \AddToHook{package/cases/after}{  
13   \RegisterMathEnvironment{subnumcases}  
14 }
```

2.4 bm

Similar to the amsbsy code in latex-lab-amsmath for `\pmb` we need to mark up copies as artifact:

```
15 \ExplSyntaxOn  
16 \AddToHook{package/bm/after}  
17 {  
18   \def\bm@pmb@@#1#2#3{%  
19     \hbox_set:Nn\l__math_tmpa_box{${\m@th#1#3$}%  
20     \dimen@#2\wd\tw@  
21     \rlap{\box_use:N\l__math_tmpa_box}%  
22     \tag_mc_end:\tag_mc_begin:n{artifact}  
23     \tag_mc_reset_box:N\l__math_tmpa_box  
24     \kern\dimen@  
25     \raise1.5\dimen@{\rlap{\box_use:N\l__math_tmpa_box}%  
26     \kern\dimen@  
27     \box_use_drop:N\l__math_tmpa_box  
28     \tag_mc_end:\tag_mc_begin:n}%  
29   }}  
30 }  
31 \ExplSyntaxOff
```

2.5 amsmath timing

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

```
32 \AddToHook{package/accents/before}{\RequirePackage{amsmath}}  
33 \AddToHook{package/cleveref/before}{\RequirePackage{amsmath}}  
34 \AddToHook{package/esint/before}{\RequirePackage{amsmath}}  
35 \AddToHook{package/grmath/before}{\RequirePackage{amsmath}}  
36 \AddToHook{package/mathabx/before}{\RequirePackage{amsmath}}  
37 \AddToHook{package/wasysym/before}{\RequirePackage{amsmath}}  
38 </kernel>
```

2.6 Wrapper files for testphase key

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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.

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