

# The latex-lab-mathpkg code<sup>\*</sup>

L<sup>A</sup>T<sub>E</sub>X Project

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Abstract

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## 1 Introduction

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

## 2 The Implementation

<sup>1</sup> `<@=math>`

<sup>2</sup> `<kernel>`

### 2.1 File declaration

<sup>3</sup> `\ProvidesFile{latex-lab-mathpkg.ltx}`

<sup>4</sup> `[2026-05-11 v0.1e mathpkg adaption]`

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\*

## 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 (with mathml-SE this probably has the same problem as `\pmb`):

```

15 \ExplSyntaxOn
16 \cs_new:Npn\__math_patch_bm_pmb:
17 {
18   \NewTaggingSocket{bm/pmb}{2}
19   \NewTaggingSocketPlug{bm/pmb}{default}
20   {
21     \tag_mc_end:\tag_mc_begin:n{artifact}
22     \tag_mc_reset_box:N##1
23     ##2
24     \tag_mc_end:
25     \tag_mc_begin:n{
26   }
27   \AssignTaggingSocketPlug{bm/pmb}{default}
28   \def\bm@pmb@##1##2##3{%
29     \hbox_set:Nn\l__math_tmpa_box{$\m@th##1##3$}%
30     \dimen@##2\wd\tw@
31     \rlap{\box_use:N\l__math_tmpa_box}%
32     \UseTaggingSocket{bm/pmb}{\l__math_tmpa_box}
33     {
34       \kern\dimen@
35       \raise1.5\dimen@\rlap{\box_use:N\l__math_tmpa_box}%
36       \kern\dimen@
37       \box_use_drop:N\l__math_tmpa_box
38     }
39   }
40 \AddToHook{package/bm/after}
41 { \__math_patch_bm_pmb: }
42 \ExplSyntaxOff

```

## 2.5 amsmath timing

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

```

43 \AddToHook{package/accents/before}{\RequirePackage{amsmath}}
44 \AddToHook{package/cleveref/before}{\RequirePackage{amsmath}}
45 \AddToHook{package/esint/before}{\RequirePackage{amsmath}}
46 \AddToHook{package/grmath/before}{\RequirePackage{amsmath}}
47 \AddToHook{package/mathabx/before}{\RequirePackage{amsmath}}
48 \AddToHook{package/wasysym/before}{\RequirePackage{amsmath}}

49 </kernel>

```

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