

# 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 adaptations 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> `[2025-06-20 v0.1c mathpkg adaptations]`

### 2.2 breqn

<sup>5</sup> `\AddToHook{package/breqn/after}{`  
<sup>6</sup> `\RegisterMathEnvironment{dmath}`  
<sup>7</sup> `\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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