

# The latex-lab-mathpkg code\*

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

November 26, 2024

Abstract

## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>The Implementation</b>	<b>1</b>
2.1	File declaration . . . . .	1
2.2	breqn . . . . .	1
2.3	cases . . . . .	2
2.4	bm . . . . .	2
2.5	Wrapper files for testphase key . . . . .	2
	<b>Index</b>	<b>2</b>

## 1 Introduction

This file implements adaptations 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 [2023-01-05 v0.1a mathpkg adaptations]
```

### 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
32  </kernel>

```

## 2.5 Wrapper files for testphase key

# 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.

<b>A</b>		<b>P</b>	
<code>\AddToHook</code> .....	5, 8, 9, 11, 12, 16	<code>\pmb</code> .....	<u>2</u>
		<code>\ProvidesFile</code> .....	3
<b>B</b>		<b>R</b>	
box commands:		<code>\raise</code> .....	25
<code>\box_use:N</code> .....	21, 25	<code>\RegisterMathEnvironment</code> .....	6, 7, 13
<code>\box_use_drop:N</code> .....	27	<code>\RequirePackage</code> .....	11
box internal commands:		<code>\rlap</code> .....	21, 25
<code>\l_math_tmpa_box</code> ..	19, 21, 23, 25, 27		
<b>D</b>		<b>T</b>	
<code>\def</code> .....	18	tag commands:	
		<code>\tag_mc_begin:n</code> .....	22, 28
<b>E</b>		<code>\tag_mc_end:</code> .....	22, 28
<code>\ExplSyntaxOff</code> .....	31	<code>\tag_mc_reset_box:N</code> .....	23
<code>\ExplSyntaxOn</code> .....	15	<code>\tagpdfparaOff</code> .....	8, 9
<b>H</b>		TeX and L <sup>A</sup> T <sub>E</sub> X 2 <sub>ε</sub> commands:	
hbox commands:		<code>\bm@pmb@</code> .....	18
<code>\hbox_set:Nn</code> .....	19	<code>\dimen@</code> .....	20, 24, 25, 26
		<code>\m@th</code> .....	19
<b>K</b>		<code>\tw@</code> .....	20
<code>\kern</code> .....	24, 26	<b>W</b>	
		<code>\wd</code> .....	20