

# Dictating L<sup>A</sup>T<sub>E</sub>X using Mathfly

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July 26, 2019

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## 1 Introduction

All of these commands can be modified or added to by editing “config/latex.toml” or using the voice command “configure latex”.

## 2 Bibliography management

Once you have added the location of your .bib file (using regular slashes) to your LaTeX config file, Mathfly includes a number of commands to make bibliography management easy:

Insert my (bib resource — bibliography)	<code>\addbibresource{your_bibliography.bib}</code>
Add paper to bibliography	Searches google scholar for the highlighted text (paper title), appends the first resulting bib-Tex citation to your bibliography file and adds the tag to the clipboard, ready to be pasted into a document.
Add book to bibliography	Same as above, but searches goodreads instead.
Add link to bibliography	Same as above, but constructs a citation from a url instead.
(edit — open) bibliography	Opens your .bib file in your text editor, for manual alterations and searching.

## 3 Document classes

Prefixed by "document class", these commands produce for example:

```
\documentclass{article}
```

article	article
beamer	beamer
book	book
letter	letter
proceedings	proc
report	report

## 4 Packages

Prefixed by "use package", these commands produce for example:

```
\usepackage{geometry}
```

The second column represents additional arguments.

AMS math		AMS math
bib latex	[style=authoryear]	biblatex
colour		color
geometry		geometry
hyper ref		hyperref
graphic X		graphicx
math tools		mathtools
multi col		multicol
long table		longtable
tabular X		tabularx
X color		xcolor
wrap figure		wrapfig

## 5 Environments

Prefixed by "begin", these commands produce for example

```
\begin{abstract}
\end{abstract}
```

The third column represents additional arguments.

abstract	abstract	
add margin	addmargin	
cases	cases	
display cases	dcases	
center	center	
columns	columns	
definition	definition	
description	description	
document	document	
(enumerate — numbered list)	enumerate	
equation	equation	
figure	figure	[h!]
flush left	flushleft	
flush right	flushright	
frame	frame	
(list — itemise)	itemize	
mini page	minipage	
multi (cols — columns)	multicols	{2}
multi line	multline	

proof	proof
quotation	quotation
quote	quote
table	table [h!]
theorem	theorem
long table	longtable {lll}
tabular	tabular {llll}
tabular X	tabular X {l X}
title page	titlepage
verbatim	verbatim
verse	verse
wrap figure	wrapfigure

## 6 Commands

All of these commands are prefixed with "insert".

### 6.1 With arguments

These commands finish in a set of curly brackets, ready for an argument, for example "\author {}"

author	author
[add] bib resource	addbibresource
caption	caption
chapter	chapter
frame title	frametitle
footnote	footnote
footnote text	footnotetext[]
graphics path	graphicspath
[include] graphics	includegraphics[width=1\textwidth]
label	label
new command	newcommand{}[]
paragraph	paragraph
paren cite	parencite
part	part
reference	ref
renew command	renewcommand
sub paragraph	subparagraph
(section — heading)	section

sub (section — heading)	subsection
sub sub (section — heading)	subsubsection
text cite	textcite
[text] bold	textbf
[text] italics	textit
[text] slanted	textsl
emphasis	emph
title	title
use theme	usetheme
<hr/>	
grave [accent]	à
acute [accent]	á
dot [accent]	â
breve [accent]	ã
(circumflex — hat)	â
(umlaut — dieresis)	ä
(tilde — squiggle)	ã
(macron — bar)	ā

## 6.2 No arguments

For example “\linebreak”.

centering	centering
column	column{0.5\textwidth}
footnote mark	footnotemark[]
horizontal line	hline
LaTeX	L <sup>A</sup> T <sub>E</sub> X
line break	linebreak
item	item
make title	maketitle
new page	newpage
no indent	noindent
page break	pagebreak
print bibliography	printbibliography
table of contents	tableofcontents
TeX	T <sub>E</sub> X
text backslash	textbackslash
text height	textheight
text width	textwidth
vertical line	vline

## 6.3 Miscellaneous Commands

These do not necessarily have to begin with a `\`.

line end    `\\`

## 7 Greek letters

Prefixed by “greek”. Where relevant I have provided pronunciation tips for best results.

alpha	$\alpha$		
beta	$\beta$		beater
gamma	$\gamma$	$\Gamma$	
delta	$\delta$	$\Delta$	
epsilon	$\varepsilon$		
zeta	$\zeta$		
eta	$\eta$		eater
theta	$\theta$	$\Theta$	they-tah
iota	$\iota$		
kappa	$\kappa$		
lambda	$\lambda$	$\Lambda$	
mu	$\mu$		moo
nu	$\nu$		new
xi	$\xi$	$\Xi$	zee
pi	$\pi$	$\Pi$	
rho	$\rho$		
sigma	$\sigma$	$\Sigma$	
tau	$\tau$		
upsilon	$\upsilon$	$\Upsilon$	
phi	$\phi$	$\Phi$	
chi	$\chi$		kie
psi	$\psi$	$\Psi$	sigh
omega	$\omega$	$\Omega$	

## 8 Mathematics

### 8.1 Symbols

In normal L<sup>A</sup>T<sub>E</sub>X mode, these must all be prefixed with “symbol”. if you are dictating a large block of mathematics, then use “enable latex maths” to remove the need for prefixes before numbers and symbols, so that you can dictate more naturally.

in-line	$\$ \$$
super [script]	$x^a$
sub [script]	$x_a$
squared	$x^2$
cubed	$x^3$
inverse	$x^{-1}$
degrees	$x^\circ$
(parens — parentheses)	$(x)$
square brackets	$[x]$
(curly brackets — braces)	$\{x\}$
cardinality bars	$ x $
left invisible delimiter	$\backslash left.$
right invisible delimiter	$\backslash right.$
square root	$\sqrt{a}$
[generic] root	$\sqrt[n]{a}$
integral	$\int$
double integral	$\iint$
triple integral	$\iiint$
infinity	$\infty$
times	$\times$
divide	$\div$
intersection	$\cap$
union	$\cup$
C dot	$\cdot$
summation	$\sum$
product	$\prod$
(direct sum — oh plus)	$\oplus$
(big direct sum — big oh plus)	$\bigoplus$
(direct product — oh times)	$\otimes$
(big direct product — big oh times)	$\bigotimes$
plus or minus	$\pm$
partial	$\partial$



fraction	$\frac{a}{b}$
binomial	$\binom{a}{b}$
sine	$\sin$
cosine	$\cos$
tangent	$\tan$
secant	$\sec$
cosecant	$\csc$
cotangent	$\cot$
arc sine	$\arcsin$
arc cosine	$\arccos$
arc tan	$\arctan$
hyperbolic sine	$\sinh$
hyperbolic cosine	$\cosh$
hyperbolic cotangent	$\coth$
hyperbolic tangent	$\tanh$
argument	$\arg$
modulus	$\text{mod}$
degree	$\text{deg}$
determinant	$\det$
dimension	$\dim$
exp	$\exp$
GCD	$\gcd$
cat hom	$\text{hom}$
kernel	$\ker$
infimum	$\inf$
supremum	$\sup$
limit	$\lim$
liminf	$\liminf$
(natural (log — logarithm) — log natural)	$\ln$
logarithm	$\log$
max	$\max$
min	$\min$
probability	$\Pr$
[is] not equal [to]	$\neq$
[is] greater [than] [or] equal [to]	$\geq$
[is] less [than] [or] equal [to]	$\leq$
[is] approximately [equal] [to]	$\approx$
proportional [to]	$\propto$
preference less [than]	$\prec$
preference less equals	$\preceq$

preference greater [than]	$\succ$
preference greater equals	$\succcurlyeq$
subset	$\subset$
superset	$\supset$
strict subset	$\subsetneq$
strict superset	$\supsetneq$
member	$\in$
empty set	$\emptyset$
(land—logic and)	$\wedge$
logic or	$\vee$
primer	$'$
logic not	$\neg$
for all	$\forall$
there exists	$\exists$
real numbers	$\mathbb{R}$
complex numbers	$\mathbb{C}$
integer numbers	$\mathbb{Z}$
rational numbers	$\mathbb{Q}$
natural numbers	$\mathbb{N}$
left arrow	$\leftarrow$
right arrow	$\rightarrow$
up arrow	$\uparrow$
down arrow	$\downarrow$
left right arrow	$\leftrightarrow$
dots	$\dots$
diagonal dots	$\ddots$
horizontal dots	$\cdots$
vertical dots	$\vdots$
low dots	$\ldots$
text	$\backslash\text{text}\{$
sub stack	$\backslash\text{substack}\{$

## 8.2 Accents

Prefixed with “accent”.

bar	$\bar{a}$
breve	$\breve{a}$
check	$\check{a}$
dot	$\dot{a}$

<code>ddot</code>	$\ddot{a}$
<code>hat</code>	$\hat{a}$
<code>wide hat</code>	$\widehat{a}$
<code>tilde</code>	$\tilde{a}$
<code>wide tilde</code>	$\widetilde{a}$
<code>vector</code>	$\vec{a}$

## 9 Templates

Templates provide a way to insert larger sections of text into your documents, for example you may have a particular set of packages which you always want to import at the head of your files, or a particular diagram which you need to draw over and over again. They are defined in the templates section of `config/latex.toml` and by default are executed using the “`template template_name`” command. A couple are included as standard for illustrative purposes but these are designed to be edited to suit your needs. For example, the command “`template wrap figure`” will insert:

```
\begin{wrapfigure}{l}{0.5\textwidth}
\centering
\label{}
\includegraphics[width=0.4\textwidth]{}
\caption{}
\end{wrapfigure}
```