Dictating LaTeX using Mathfly

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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)	\addbibresource{your_bibliography.bib}
Add paper to bibliography	Searches google scholar for the highlighted text (paper title), appends the first resulting bibTeX 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	
center	center	
columns	columns	
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	
quotation	quotation	
quote	quote	
table	table	[h!]

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
grave [accent]	à
acute [accent]	á
dot [accent]	ȧ
breve [accent]	ă
(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	LaTeX
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	TeX
text backslash	textbackslash
text height	textheight
text width	textwidth
vertical line	vline

7 Greek letters

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

alpha	α		
beta	β		beater
gamma	γ	Γ	
delta	δ	Δ	
epsilon	ε		
zeta	ζ		
eta	η		eater
theta	θ	Θ	they-tah
iota	ι		
kappa	κ		
lambda	λ	Λ	
mu	μ		moo
nu	ν		new
xi	ξ	Ξ	zee
pi	π	Π	
rho	ρ		
sigma	σ	Σ	
tau	τ		
upsilon	υ	Υ	
phi	ϕ	Φ	
chi	χ		kie
psi	ψ	Ψ	sigh
omega	ω	Ω	

8 Mathematics

8.1 Symbols

In normal LaTeX 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°

(parens — parentheses)	(x)
square brackets	$[x]$
(curly brackets — braces)	$\{\}$
square root	$\sqrt{a}$
[generic] root	$\sqrt[n]{a}$
integral	$\int$
double integral	$\iint$
triple integral	$\iiint$
infinity	∞
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	∂
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	$\mod$
degree	$\deg$

determinant	$\det$
dimension	$\dim$
exp	$\exp$
GCD	$\gcd$
cat hom	$\hom$
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	$\succeq$
subset	$\subset$
superset	$\supset$
strict subset	$\subsetneq$
strict superset	$\supsetneq$
member	$\in$
empty set	$\emptyset$
(land—logic and)	$\wedge$
logic or	$\vee$
primer	$\prime$
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	$\leftrightarrow$
dot dot dot	$\ldots$
diagonal dots	$\ddots$
horizontal dots	$\cdots$
vertical dots	$\vdots$

8.2 Accents

Prefixed with "accent".

bar	$\bar{a}$
breve	$\breve{a}$
check	$\check{a}$
dot	$\dot{a}$
ddot	$\ddot{a}$
hat	$\hat{a}$
wide hat	$\widehat{a}$
tilde	$\tilde{a}$
wide tilde	$\widetilde{a}$
vector	$\vec{a}$

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}
```