LaTeX Crib Sheet[1]

The code in the table below should appear within a pair of math delimiters such as `$...$` or `\[...\]`, or within an environment that automatically puts LaTeX in math mode such as the `align*` environment described in the **LaTeX Information** document.

Description	Symbol	Code
set braces	$\{ \}$	`\{ \}`
a divides b	$a \mid b$	`a \mid b`
a does not divide b	$a \nmid b$	`a \nmid b`
absolute value, cardinality	$\|x\|$, $\|S\|$	`|x|`, `|S|`
"blackboard bold" letters	$\mathbb{N}$, $\mathbb{Z}$, $\mathbb{R}$	`\mathbb{N}`, `\mathbb{Z}`, `\mathbb{R}`
caligraphic letters	$\mathcal{P}$, $\mathcal{K}$	`\mathcal{P}`, `\mathcal{K}`
modulo n	$\pmod{n}$	`\pmod{n}`
x is an element of A	$x \in A$	`x \in A`
x is not an element of A	$\notin$	`\notin`
a is less than or equal to b	$a \leq b$	`a \leq b`
a is not equal to b	$a \neq b$	`a \neq b`
A is a subset of B	$A \subseteq B$	`A \subseteq B`
A is not a subset of B	$A \nsubseteq B$	`A \nsubseteq B`
A union B	$A \cup B$	`A \cup B`
A intersect B	$A \cap B$	`A \cap B`
A complement	$\overline{A}$	`\overline{A}`
Cartesian product	$A \times B$	`A \times B`
fractions	$\frac{a+b}{c}$	`\frac{a+b}{c}`
exponents	x^2 x^{m+n}	`x^2` `x^{m+n}`
subscripts	a_i a_{i+j}	`a_i` `a_{i+j}`
exponents & subscripts	a_i^2 a_{i+j}^{m+n}	`a_i^2` `a_{i+j}^{m+n}`
ellipsis	$1, 2, 3, \ldots, 10$	`1,2,3,\ldots,10`
vertically centered ellipsis	$1 + 2 + 3 + \cdots + 10$	`1+2+3+\cdots+10`
small centered dot	$a \cdot b$	`a \cdot b`
small centered circle	$f \circ g$	`f \circ g`
x is related to y by R	$x \mathrel{R} y$	`x \mathrel{R} y`
x is related to y by R	$x \mathrel{R} y$	`x \mathrel{R} y`
f is a function from A to B	$f : A \to B$	`f:A \to B`

[1] Thanks to Prof. Lynne Doty for sharing the first version of this document, and for suggesting several additions!

The table below contains some formatting commands for regular text and should not appear within a pair of math delimiters.

FORMATTING	CODE
This is *italicized text*	`This is \textit{italicized text}`
This is **bold text**	`This is \textbf{bold text}`
new page	`\newpage`
new paragraph	leave a blank line in the code
add vertical space between paragraphs	`\vspace{0.25in}` (change to desired length)
new line	`\newline` or `\\`
LaTeX logo	`\LaTeX\`

Please note: You should not use the math delimiters `$...$` to create italicized text, nor should you use `\textit{...}` to create italicized math symbols.

SPECIAL CHARACTERS: The symbols

$$\#\quad \$\quad \%\quad \&\quad \_\quad \{\quad \}\quad \backslash$$

are **special characters** in LaTeX and have special meanings when they appear in LaTeX code. You can use *most* of these special characters as ordinary characters in the text of a document by typing a backslash in front of them:

`\#` `\$` `\%` `\&` `\_` `\{` `\}`

The only exception is the backslash character \ itself. If you need to use this special character as an ordinary character in the text of your document—which is unlikely—you must type `$\backslash$`.