TEXDraw
Reference

TEX-typing plugin for Unity

Version 5.0.0
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1 Introduction

TEX has wide variety of commands to make up over thousand symbols and hundreds. Here in this document you can find information where TEX syntax works in *TEXDraw* and which is not.

2 Enviroments

An enviroment begin with `\begin{*environment-name*}` and ends with `\end{*environment-name*}`. These environment gates must be in pair and in order, otherwise the behavior will be undefined.

2.1 Math Mode

`\begin{math}...\end{math}`

This environment sets up the math mode. When inside math block, all whitespaces will be discarded and some additional math functions (like fractions and roots) can be used. The font also changed to italics for lower alphabets and slanted for upper alphabets. Ligatures also turned off.

There are two types for math mode: Inline mode and block mode. Inline mode can be activated with surrounding it with $, for instance $\frac{2}{3}$ by `$2\over3$` while block mode you can use either double dollar sign $$ or usual `\begin{math}...\end{math}`, When you want to inline math with paragraphs, choose inline mode, otherwise math block mode will move the math expression in new, exclusive line. Like:

$$\frac{2}{3}$$

for `$$2\over3$$`.

2.2 Verbatim Mode

`\begin{verbatim}...\end{verbatim}`

This environment sets up verbatim mode, which leaves TEXignores any special character and instead writing it as-is. This is a perfect solution if you want to write code sample or other document which uses special characters, so you don't have to escape every characters manually.

Like math, there's two mode: Inline or block mode. Block mode can be activated with usual `\begin{verbatim}...\end{verbatim}`. Inline mode can be activated by surrounding it with "`\verb|`" at beginning and "`|`" at the end. If you want to use "`|`" in inline verbatim then you can use other non-special symbols such as "`\verb!...!`".

2.3 Tabular Mode

`\begin{tabular}{column-setup}...\end{tabular}`

The tabular mode arranges expression in inside the environment as a table. You use alignment control `&` and paragraph control `\\` to control text to next column and row. The flow is always row-by-row.

This enviroment requires you to write `{column-setup}` followed right after `\begin{tabular}`. It is used to identify column properties. The most simplest form is `{c c c}` where `c` is property of alignment (center). Other options are `l` (left) and `r` (right).

To show lines, you can use `|` between column definition for vertical lines and `\hline` between row definitions (begin, end, and after `\\`) for horizontal lines. For example:

1	2
3	4

3 Commands

3.1 Font Sizing

Font size can be adjusted by following commands:

TEXDraw	`\HUGE`	27pt
TEXDraw	`\Huge`	24.88pt
TEXDraw	`\huge`	20.74pt
TEXDraw	`\LARGE`	17.28pt
TEXDraw	`\Large`	14.4pt
TEXDraw	`\large`	12pt
TEXDraw	`\normalsize`	10pt
TEXDraw	`\small`	9pt
TEXDraw	`\footnotesize`	8pt
TEXDraw	`\scriptsize`	7pt
TEXDraw	`\ssmall`	6pt
TEXDraw	`\tiny`	5pt

3.2 Font Styling

Font style can be adjusted by following commands:

Single Switch Commands:

TEXDraw	`\rm`
TEXDraw	`\sl`
TEXDraw	`\it`
TEXDraw	`\bf`
TEXDraw	`\tt`
TEXDraw	`\sf`
TEXDraw	`\sc`

Multi Switch Commands:

TEXDraw	`\rmfamily`
TEXDraw	`\ttfamily`
TEXDraw	`\sffamily`
TEXDraw	`\mdseries`
TEXDraw	`\bfseries`
TEXDraw	`\upshape`
TEXDraw	`\slshape`
TEXDraw	`\itshape`
TEXDraw	`\scshape`

3.3 Alignments

By default text are justified, but you can configure it by `\flushleft`, `\flushright`, `\centering` for left, right, and center alignment. However for a better tuning, you can use Environments instead:

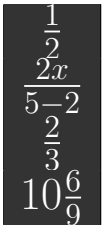
- `\begin{flushleft}...\end{flushleft}`
- `\begin{flushright}...\end{flushright}`
- `\begin{center}...\end{center}`

4 Math Elements

4.1 Fraction

$$\frac{\text{Nominator}}{\text{Denominator}}$$

Fractions can be written either in these formats:

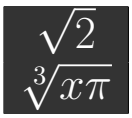


```
\frac 12
\frac{2x}{5-2}
2\over3
10{6\over9}
```

4.2 Roots

$$\sqrt[\text{Degree}]{\text{Base}}$$

Root expressions can be written either in these formats:



```
\sqrt 2
\sqrt[3]{x\pi}
```

4.3 Scripts

$$\text{Base}_{\text{Sub}}^{\text{Super}}$$

Script expressions can be written either in these formats:
(Warning: any nested script must be parenthesed by curly bracket)

```
2^3_4
2^{3^4}
```

4.4 Large Operators

$$\sum_{i=0}^{\infty} \neq \int_{b}^{a}$$

Large operators are just like scripts but it's placed below or on top of it. Some operators applying this are defined in large operator list in section "Symbols" below.

If large operators are in put on inline or cramped mode it will behave like a regular script. For example $\sum_{i=0}^{\infty} \neq \int_{b}^{a}$

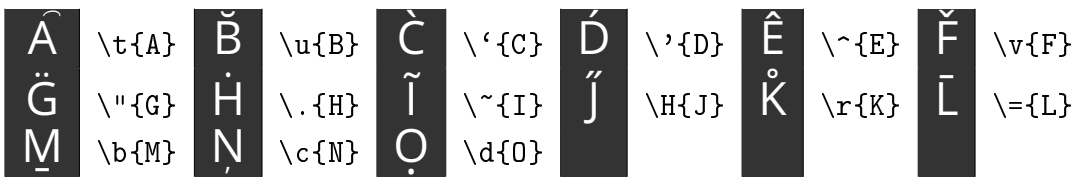
4.5 Delimiters

4.6 Matrix

$$\begin{array}{cc} rra & bbbb \\ \hline c & d \end{array}$$

5 Symbols

5.1 Accents



```
\t{A}  \u{B}  \‘{C}  \’{D}  \^{E}  \v{F}
\"{G}  \.{H}  \~{I}  \H{J}  \r{K}  \={L}
\b{M}  \c{N}  \d{O}
```

5.2 Greeks

A	\Alpha*	H	\Eta*	N	\Nu*	T	\Tau*
B	\Beta*	Θ	\Theta	Ξ	\Xi	Υ	\Upsilon
Γ	\Gamma	I	\Iota*	O	\Omicron*	Φ	\Phi
Δ	\Delta	K	\Kappa*	Π	\Pi	X	\Chi*
P	\Epsilon*	Λ	\Lambda	P	\Rho*	Ψ	\Psi
Z	\Zeta*	M	\Mu*	Σ	\Sigma	Ω	\Omega
α	\alpha	η	\eta	ν	\nu	τ	\tau
β	\beta	θ	\theta	ξ	\xi	υ	\upsilon
γ	\gamma	ι	\iota	o	\omicron*	ϕ	\phi
δ	\delta	κ	\kappa	π	\pi	χ	\chi
ρ	\epsilon	λ	\lambda	ρ	\rho	ψ	\psi
ζ	\zeta	μ	\mu	σ	\sigma	ω	\omega
ϱ	\varrho	ε	\varepsilon	$\varkappa$	\varkappa	ϖ	\varpi
φ	\varphi	ς	\varsigma	ϑ	\vartheta		

*) some symbols is just a alternative syntax to capital letters.

5.3 Text Symbols

$	\$	&	\&	#	\#	%	\%	{	\{	}	\}
¶	\P	§	\S	†	\dag	‡	\ddag	ı	\i	ȷ	\j
ł	\l	Ł	\L	ø	\o	Ø	\O	å	\aa	Å	\AA
ß	\ss	SS	\SS	æ	\ae	Æ	\AE	œ	\oe	Æ	\OE

_	_
/	\slash
©	\copyright
TM	\trademark
✠	\maltese
~	\asciitilde
¿	\questiondown
“	\quotedblleft
a	\ordfeminine
␣	\visiblespace

–	\endash
\	\backslash
®	\circledR
✓	\checkmark
¢	\cent
^	\asciicircum
‘	\quoteleft
”	\quotedblright
*	\asteriskcentered
‰	\permil

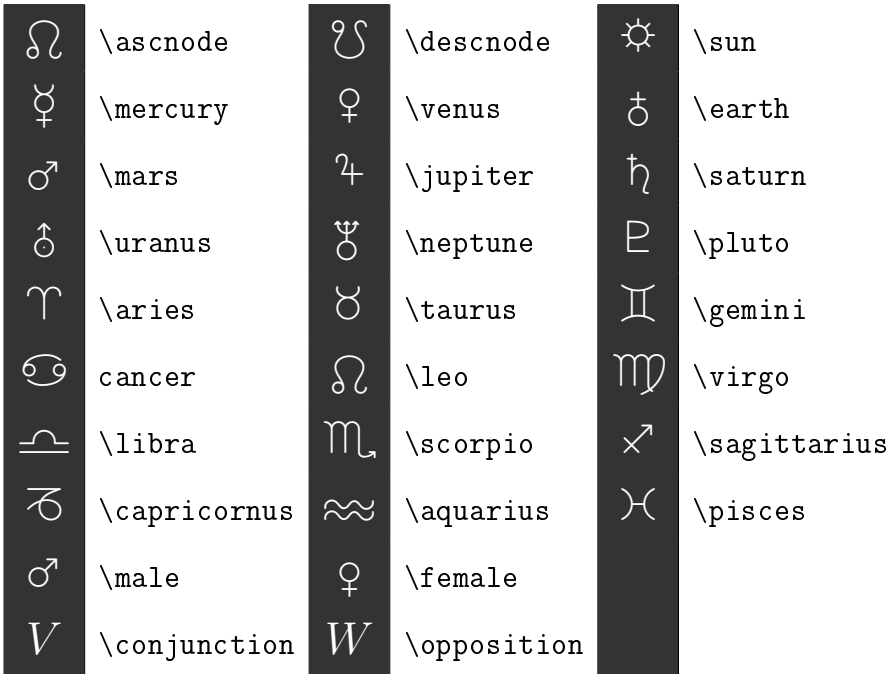
—	\emdash
|	\bar
Ⓢ	\circledS
£	\pounds
…	\dots
¡	\exclamdown
’	\quoteright
º	\ordmasculine
·	\periodcentered
¥	\yen

∞	\infty
ℓ	\ell
$\emptyset$	\emptyset
$\imath$	\thorn
$\eth$	\eth
$\beth$	\beth
$\digamma$	\digamma
$\Im$	\Im
$\hbar$	\hslash
$\complement$	\complement
$\forall$	\forall
$\surd$	\surd
$\diagup$	\diagup
$\bowtie$	\bowtie

$\prime$	\prime
$\imath$	\imath
∂	\partial
$\jmath$	\Thorn
$\eth$	\dh
$\gimel$	\gimel
$\wp$	\wp
$\aleph$	\aleph
$\hbar$	\hbar
$\vert$	\brokenvert
$\exists$	\exists
∇	\nabla
$\diagdown$	\diagdown

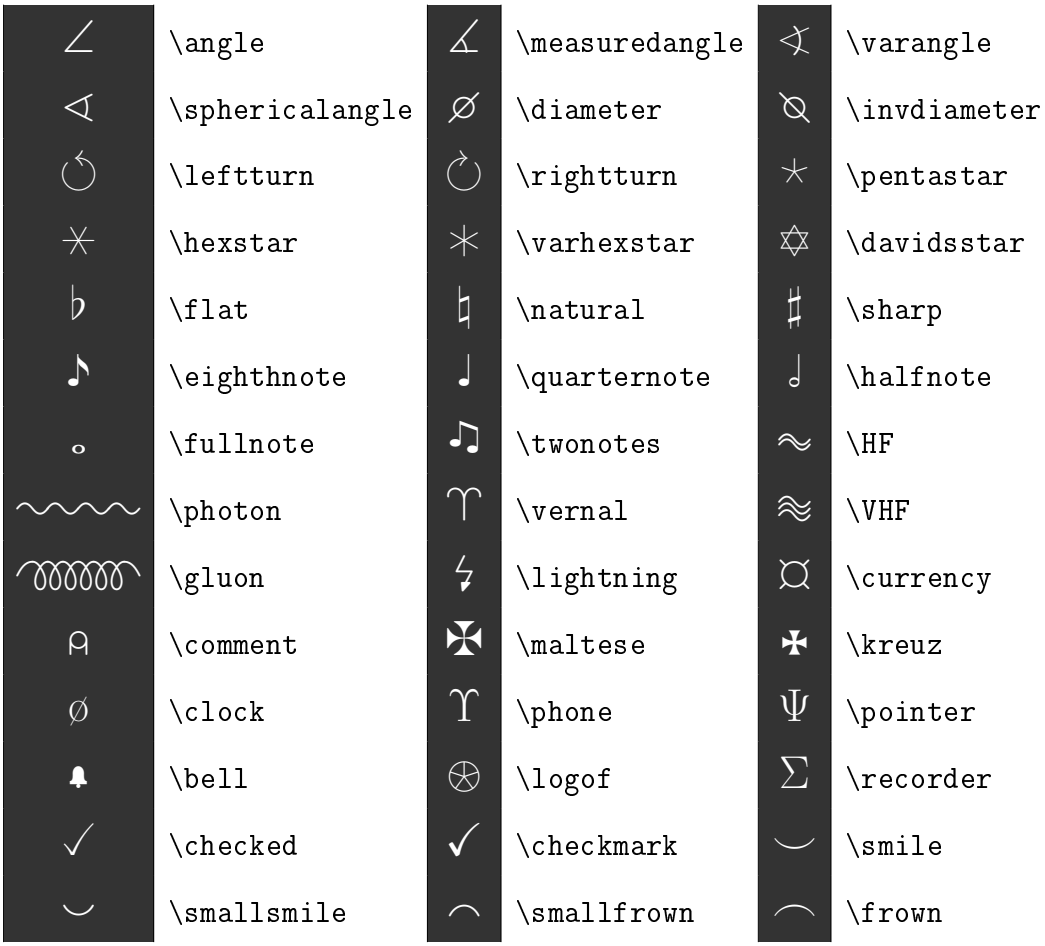
$\backprime$	\backprime
$\jmath$	\jmath
$\varnothing$	\varnothing
$\mho$	\mho
l	\openo
$\daleth$	\daleth
$\Re$	\Re
$\Finv$	\Finv
$\Game$	\Game
U	\inve
$\nexists$	\nexists
$\amalg$	\amalg
$\neg$	\neg

5.4 Astronomical Symbols

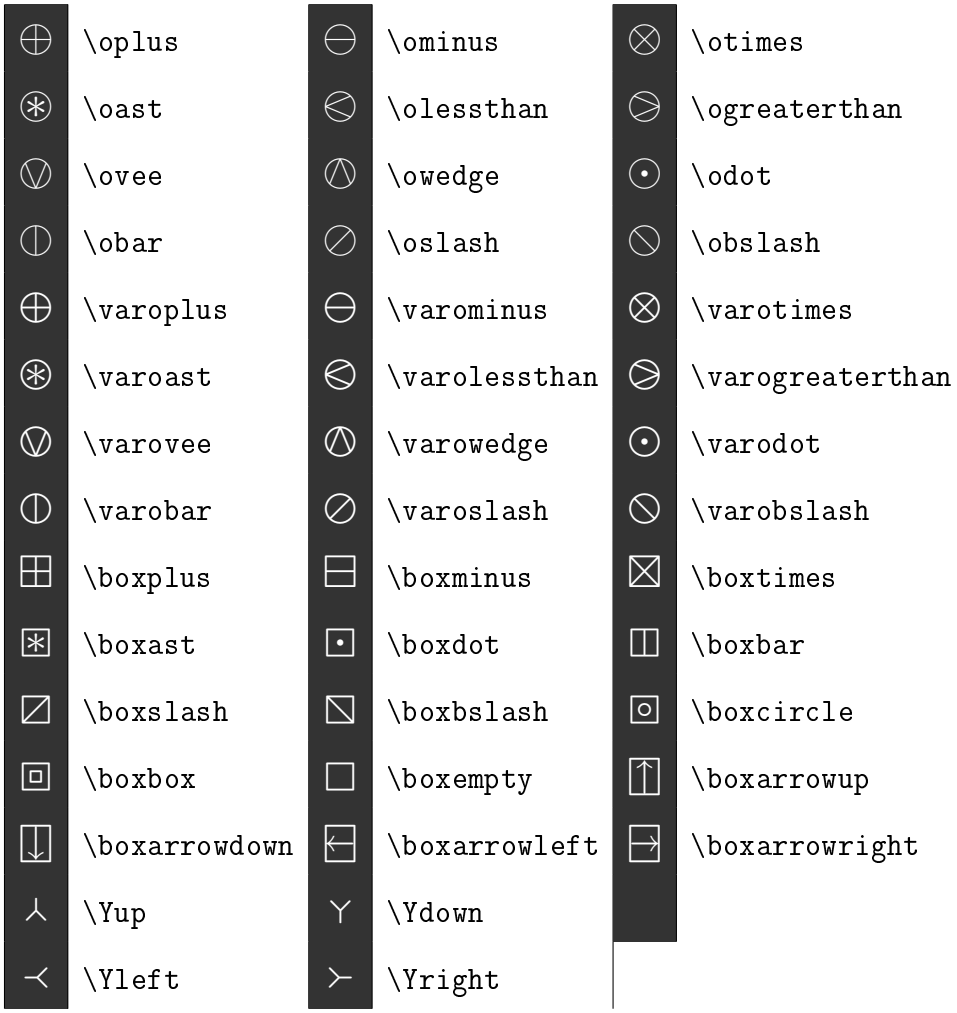


5.5 Geometrical Symbols

5.6 Geometrical Units

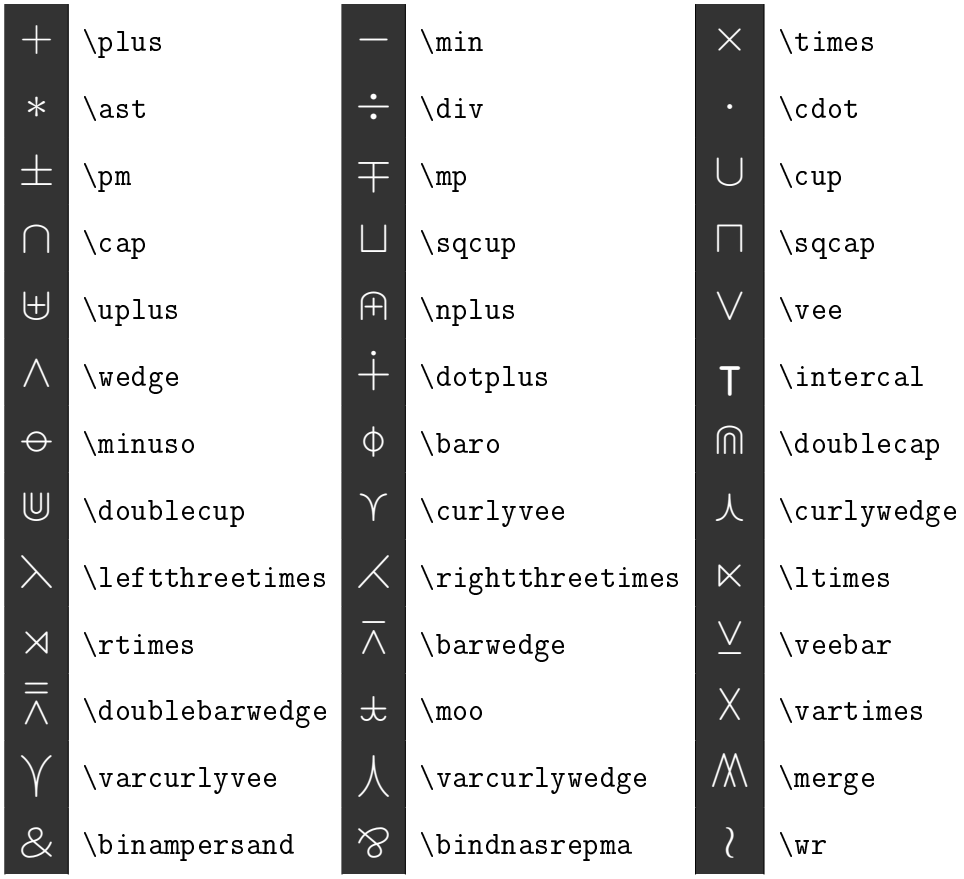


5.7 Geometrical Operators



5.8 Binary Operators

Symbols that "just work" in math mode: $+ - = = ! / ( ) [ ] < > | ' : *$



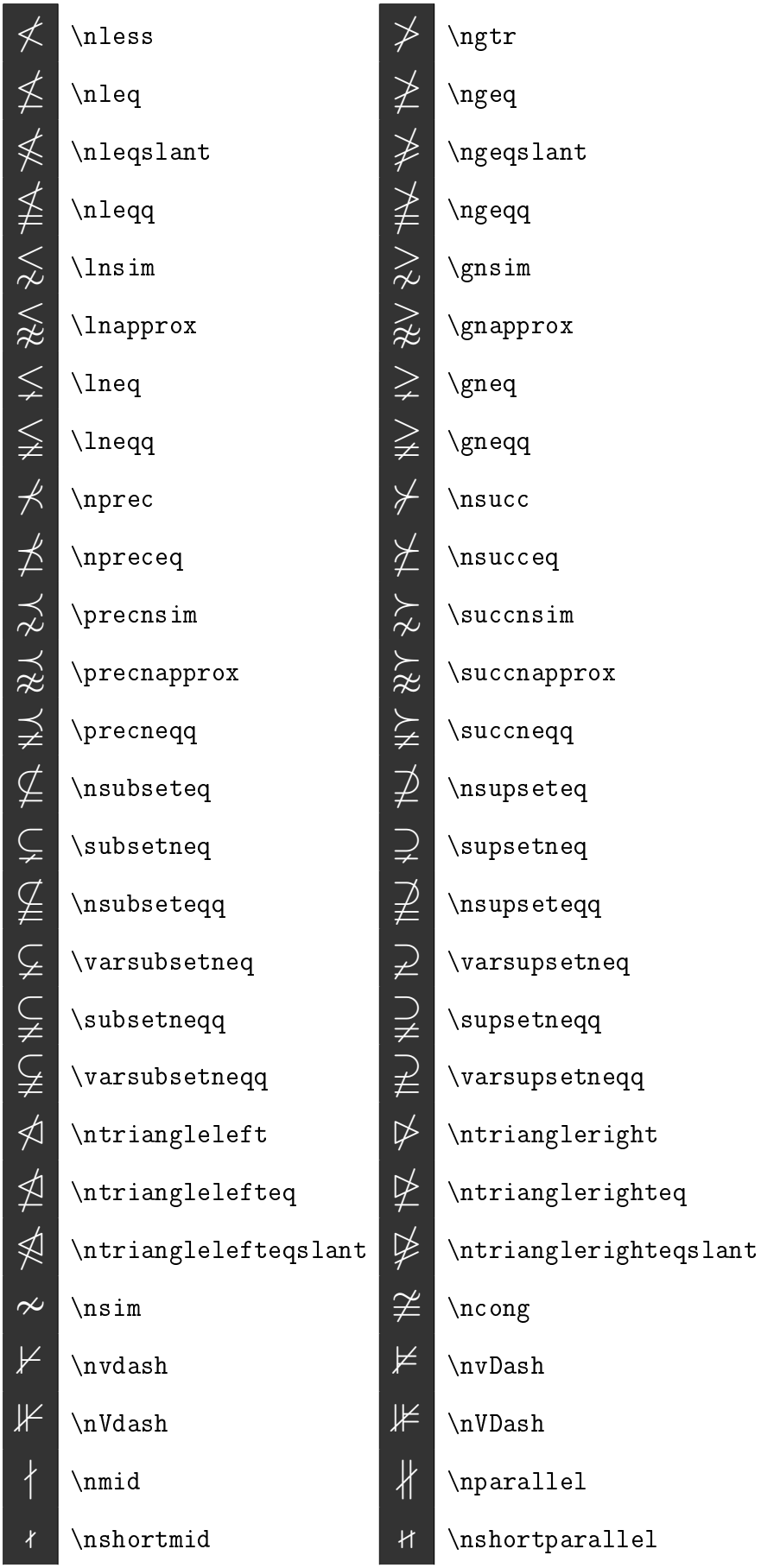
5.9 Binary Comparisons

5.10 Binary Relations

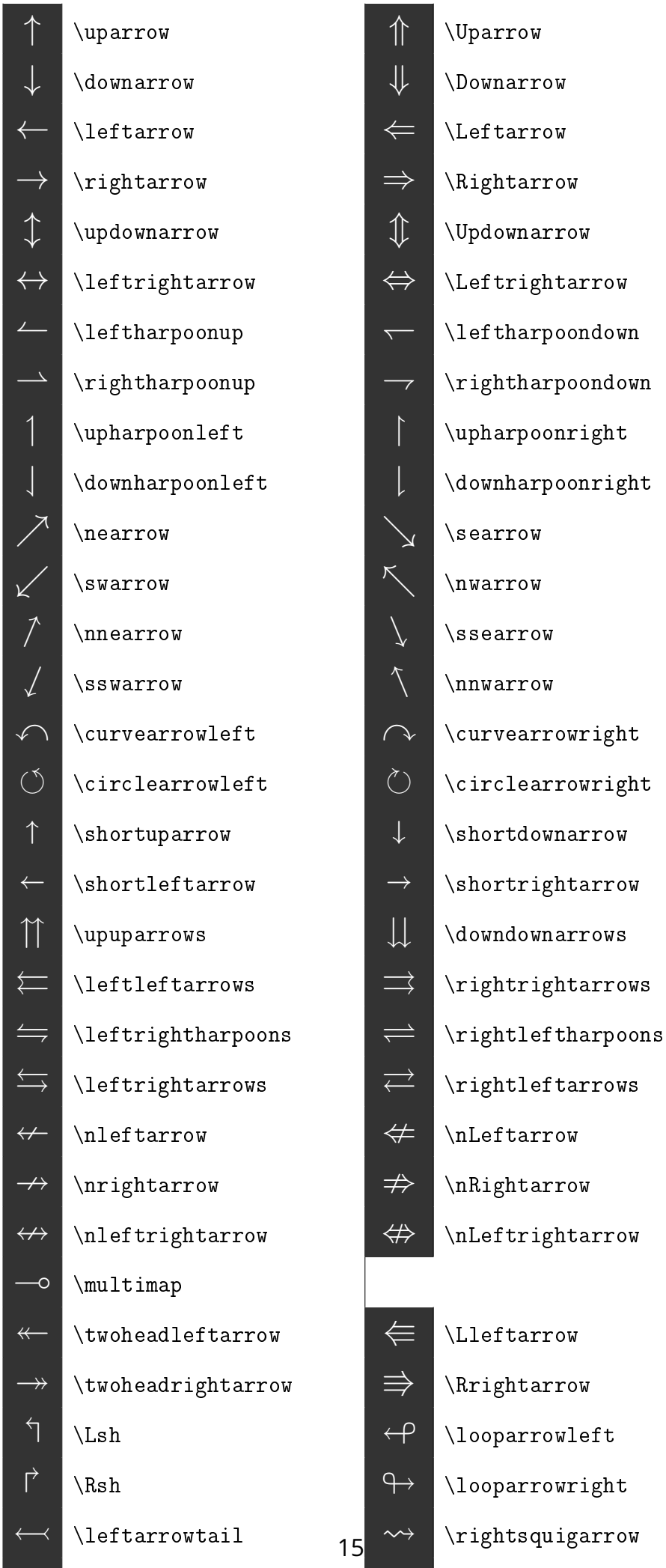
$<$	\less
$\leq$	\leq
$\leqslant$	\leqslant
$\leqq$	\leqq
$\lesssim$	\lesssim
$\lessapprox$	\lessapprox
$\eqslantless$	\eqslantless
$\lessgtr$	\lessgtr
$\lesseqgtr$	\lesseqgtr
$\lesseqqgtr$	\lesseqqgtr
$\ll$	\ll
$\lll$	\lll
$\lessdot$	\lessdot
$\prec$	\prec
$\preceq$	\preceq
$\precsim$	\precsim
$\precapprox$	\precapprox
$\preccurlyeq$	\preccurlyeq
$\curlyeqprec$	\curlyeqprec
$\subset$	\subset
$\subseteq$	\subseteq
$\sqsubset$	\sqsubset
$\sqsubseteq$	\sqsubseteq
$\subsetplus$	\subsetplus
$\subsetpluseq$	\subsetpluseq
$\Subset$	\Subset
$\subseteqq$	\subseteqq
$\vartriangleleft$	\triangleleft
$\vartriangleleft$	\vartriangleleft
$\trianglelefteq$	\trianglelefteq
$\trianglelefteqslant$	\trianglelefteqslant

$>$	\gtr
$\geq$	\geq
$\geqslant$	\geqslant
$\geqq$	\geqq
$\gtrsim$	\gtrsim
$\gtrapprox$	\gtrapprox
$\eqslantgtr$	\eqslantgtr
$\gtrless$	\gtrless
$\gtreqless$	\gtreqless
$\gtreqqless$	\gtreqqless
$\gg$	\gg
$\ggg$	\ggg
$\gtrdot$	\gtrdot
$\succ$	\succ
$\succeq$	\succeq
$\succsim$	\succsim
$\succapprox$	\succapprox
$\succcurlyeq$	\succcurlyeq
$\curlyeqsucc$	\curlyeqsucc
$\supset$	\supset
$\supseteq$	\supseteq
$\sqsupset$	\sqsupset
$\sqsupseteq$	\sqsupseteq
$\supsetplus$	\supsetplus
$\supsetpluseq$	\supsetpluseq
$\Supset$	\Supset
$\supseteqq$	\supseteqq
$\vartriangleright$	\triangleright
$\vartriangleright$	\vartriangleright
$\trianglerighteq$	\trianglerighteq
$\trianglerighteqslant$	\trianglerighteqslant

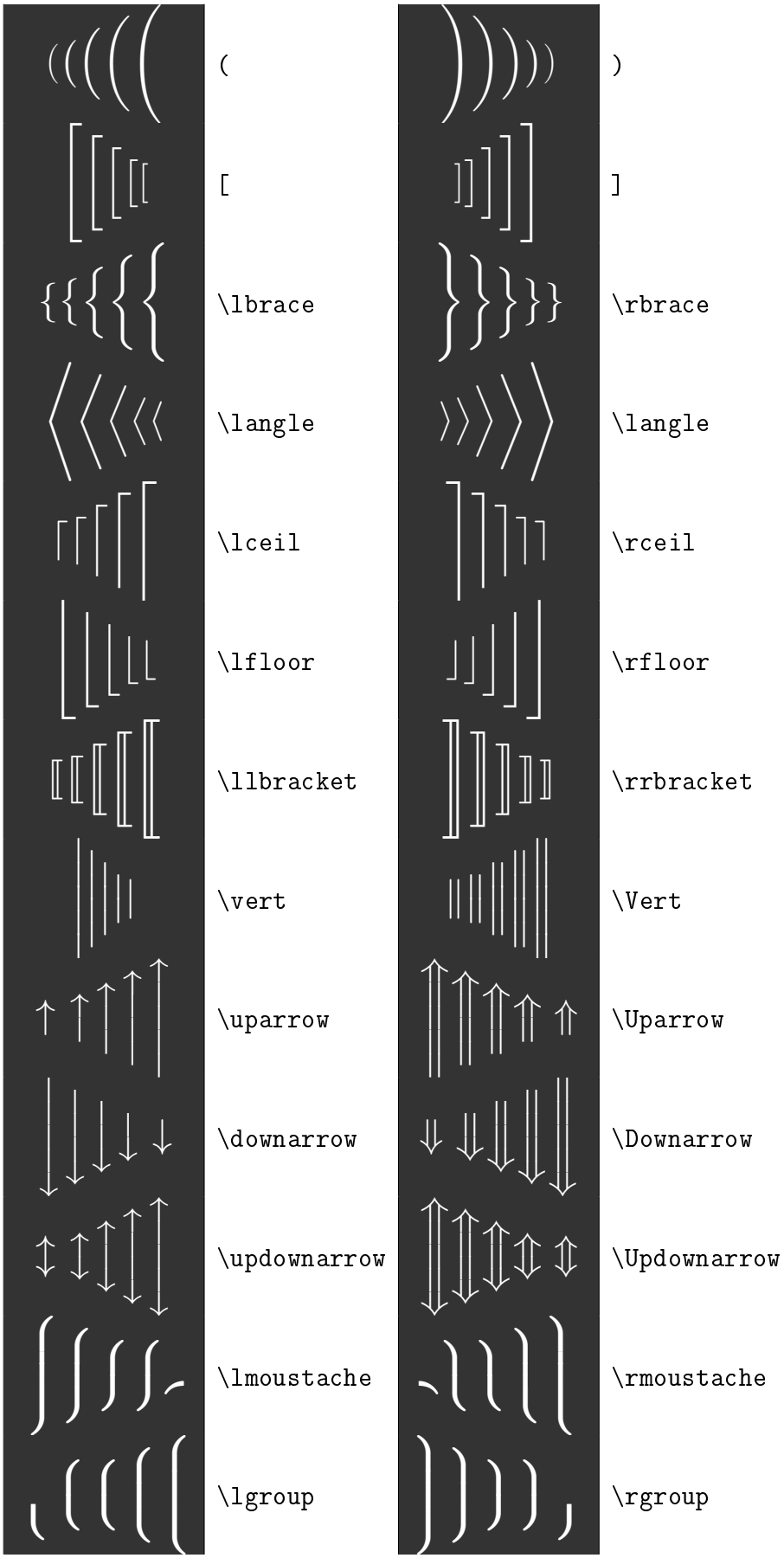
5.11 Negated Relations



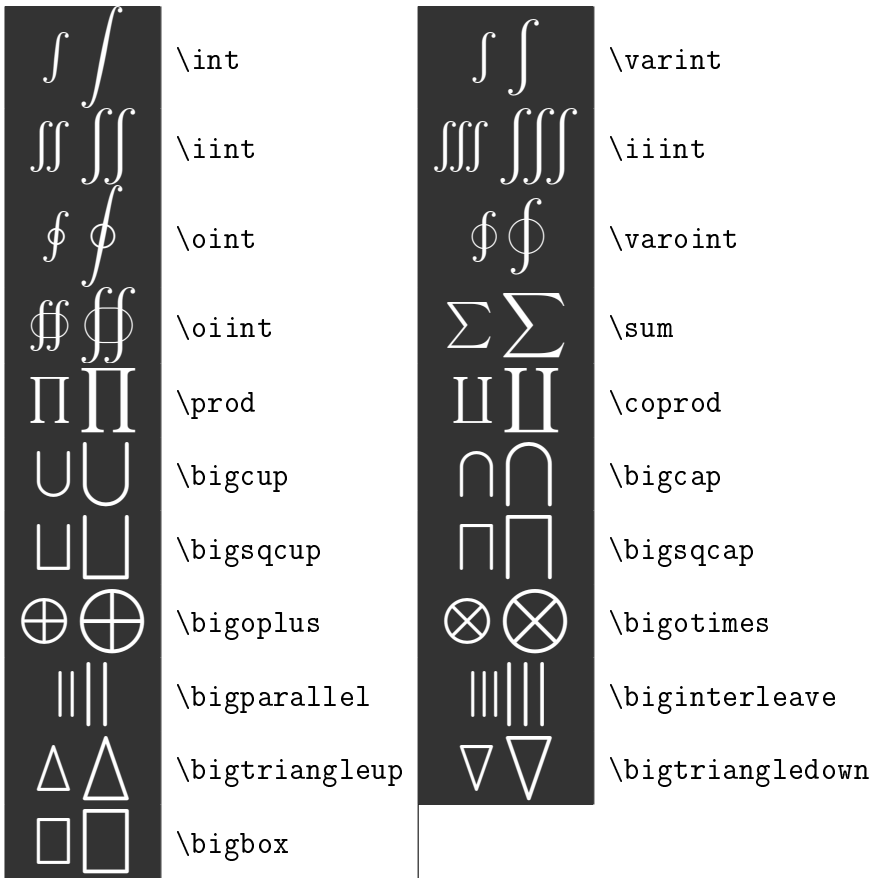
5.12 Arrows


\uparrow
\Uparrow
\downarrow
\Downarrow
\leftarrow
\Leftarrow
\rightarrow
\Rightarrow
\updownarrow
\Updownarrow
\leftrightarrow
\Leftrightarrow
\leftharpoonup
\leftharpoondown
\rightharpoonup
\rightharpoondown
\upharpoonleft
\upharpoonright
\downharpoonleft
\downharpoonright
\nearrow
\searrow
\swarrow
\nwarrow
\nnearrow
\ssearrow
\sswarrow
\nnwarrow
\curvearrowleft
\curvearrowright
\circlearrowleft
\circlearrowright
\shortuparrow
\shortdownarrow
\shortleftarrow
\shortrightarrow
\upuparrows
\downdownarrows
\leftleftarrows
\rightrightarrows
\leftrightharpoons
\rightleftharpoons
\leftrightarrows
\rightleftarrows
\nleftarrow
\nLeftarrow
\nrightarrow
\nRightarrow
\nleftrightarrow
\nLeftrightarrow
\multimap
\twoheadleftarrow
\Lleftarrow
\twoheadrightarrow
\Rrightarrow
\Lsh
\looparrowleft
\Rsh
\looparrowright
\leftarrowtail
\rightsquigarrow

5.13 Delimiters



5.14 Big Operators



5.15 Functions

Built-in defined functions:

$$\cos \bullet \sec \bullet \arccos \bullet \cosh \bullet \coth \bullet \sin \bullet \csc \bullet \arcsin \bullet \sinh \bullet \tan \bullet \cot \bullet \arctan \bullet \tanh$$
$$\arg \bullet \dim \bullet \hom \bullet \lg \bullet \max \bullet \sup \bullet \deg \bullet \exp \bullet \inf \bullet \lim \bullet \min \bullet \det \bullet \gcd \bullet \ker \bullet \sup$$

Other functions can be written using `\operatorname{name}` such as in $y = \mathrm{f}(x)$ be written as `$y = \operatorname{f}(x)$`