LaTeX Math Symbols

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File A.tex contains all necessary code
This file is prepared by running
latex A.tex
and cutting the pictures out of the resulting preview. Relevant parts of the latex code are reproduced under each of the pictures. Some of the symbols have an explanatory text. This text is found in the latex code, mostly stating that they are parts of some spacial setup and cannot be used in standard LaTeX. Each of the figures also has a link to itself.

Greek Letters

α	\alpha	θ	\theta	o	o	τ	\tau
β	\beta	ϑ	\vartheta	π	\pi	υ	\upsilon
γ	\gamma	γ	\gamma	ϖ	\varpi	ϕ	\phi
δ	\delta	κ	\kappa	ρ	\rho	φ	\varphi
ϵ	\epsilon	λ	\lambda	ϱ	\varrho	χ	\chi
ε	\varepsilon	μ	\mu	σ	\sigma	ψ	\psi
ζ	\zeta	ν	\nu	ς	\varsigma	ω	\omega
η	\eta	ξ	\xi				
Γ	\Gamma	Λ	\Lambda	Σ	\Sigma	Ψ	\Psi
Δ	\Delta	Ξ	\Xi	Υ	\Upsilon	Ω	\Omega
Θ	\Theta	Π	\Pi	Φ	\Phi		

Table 1: Greek Letters

t1.gif

```
\alpha          \theta          o          \tau
\beta           \vartheta       \pi        \upsilon
\gamma          \gamma          \varpi     \phi
\delta          \kappa          \rho       \varphi
\epsilon        \lambda         \varrho    \chi
\varepsilon     \mu             \sigma     \psi
\zeta           \nu             \varsigma  \omega
\eta            \xi

\Gamma          \Lambda         \Sigma     \Psi
\Delta          \Xi             \Upsilon   \Omega
\Theta          \Pi             \Phi
```

Binary Operation Symbols

±	\pm	∩	\cap	◇	\diamond	⊕	\oplus
∓	\mp	∪	\cup	△	\bigtriangleup	⊖	\ominus
×	\times	⊎	\uplus	▽	\bigtriangledown	⊗	\otimes
÷	\div	⊓	\sqcap	◁	\triangleleft	⊘	\oslash
*	\ast	⊔	\sqcup	▷	\triangleright	⊙	\odot
⋆	\star	∨	\vee	◁	\lhd^b	◯	\bigcirc
∘	\circ	∧	\wedge	▷	\rhd^b	†	\dagger
•	\bullet	\	\setminus	⊴	\unlhd^b	‡	\ddagger
·	\cdot	≀	\wr	⊵	\unrhd^b	⨿	\amalg
+	+	−	-				

t2.gif

```
\pm             \cap            \diamond            \oplus
\mp             \cup            \bigtriangleup      \ominus
\times          \uplus          \bigtriangledown    \otimes
\div            \sqcap          \triangleleft       \oslash
\ast            \sqcup          \triangleright      \odot
\star           \vee            \lhd$^b$            \bigcirc
\circ           \wedge          \rhd$^b$            \dagger
\bullet         \setminus       \unlhd$^b$          \ddagger
\cdot           \wr             \unrhd$^b$          \amalg
+               -
```

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{\tt oldlfont}, {\tt newlfont}, {\tt amsfonts} or {\tt amssymb}.

Relation Symbols

≤	\leq	≥	\geq	≡	\equiv	⊨	\models
≺	\prec	≻	\succ	∼	\sim	⊥	\perp
≼	\preceq	≽	\succeq	≃	\simeq	∣	\mid
≪	\ll	≫	\gg	≍	\asymp	∥	\parallel
⊂	\subset	⊃	\supset	≈	\approx	⋈	\bowtie
⊆	\subseteq	⊇	\supseteq	≅	\cong	⋈	\Join^b
⊏	\sqsubset^b	⊐	\sqsupset^b	≠	\neq	⌣	\smile
⊑	\sqsubseteq	⊒	\sqsupseteq	≐	\doteq	⌢	\frown
∈	\in	∋	\ni	∝	\propto	=	=
⊢	\vdash	⊣	\dashv	<	<	>	>
:	:						

t3.gif

```
\leq            \geq            \equiv              \models
\prec           \succ           \sim                \perp
\preceq         \succeq         \simeq              \mid
\ll             \gg             \asymp              \parallel
\subset         \supset         \approx             \bowtie
\subseteq       \supseteq       \cong               \Join$^b$
\sqsubset$^b$   \sqsupset$^b$   \neq                \smile
\sqsubseteq     \sqsupseteq     \doteq              \frown
\in             \ni             \propto             =
```

```
 \vdash              \dashv              <                   >
 :

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```

Punctuation Symbols

,	,	;	;	: \colon	. \ldotp	· \cdotp

Table 4: Punctuation Symbols

t4.gif

```
 ,          ;          \colon              \ldotp              \cdotp
```

Arrow Symbols

←	\leftarrow	⟵	\longleftarrow	↑	\uparrow
⇐	\Leftarrow	⟸	\Longleftarrow	⇑	\Uparrow
→	\rightarrow	⟶	\longrightarrow	↓	\downarrow
⇒	\Rightarrow	⟹	\Longrightarrow	⇓	\Downarrow
↔	\leftrightarrow	⟷	\longleftrightarrow	↕	\updownarrow
⇔	\Leftrightarrow	⟺	\Longleftrightarrow	⇕	\Updownarrow
↦	\mapsto	⟼	\longmapsto	↗	\nearrow
↩	\hookleftarrow	↪	\hookrightarrow	↘	\searrow
↼	\leftharpoonup	⇀	\rightharpoonup	↙	\swarrow
↽	\leftharpoondown	⇁	\rightharpoondown	↖	\nwarrow
⇌	\rightleftharpoons	↝	\leadsto[b]		

t5.gif

```
 \leftarrow                \longleftarrow            \uparrow
 \Leftarrow                \Longleftarrow            \Uparrow
 \rightarrow               \longrightarrow           \downarrow
 \Rightarrow               \Longrightarrow           \Downarrow
 \leftrightarrow           \longleftrightarrow       \updownarrow
 \Leftrightarrow           \Longleftrightarrow       \Updownarrow
 \mapsto                   \longmapsto               \nearrow
 \hookleftarrow            \hookrightarrow           \searrow
 \leftharpoonup            \rightharpoonup           \swarrow
 \leftharpoondown          \rightharpoondown         \nwarrow
 \rightleftharpoons        \leadsto$^b$

$^b$ Not predefined in a format based on {\tt basefont.tex}.
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```

Miscellaneous Symbols

…	\ldots	⋯	\cdots	⋮	\vdots	⋱	\ddots
ℵ	\aleph	′	\prime	∀	\forall	∞	\infty
ℏ	\hbar	∅	\emptyset	∃	\exists	□	\Box^b
ı	\imath	∇	\nabla	¬	\neg	◇	\Diamond^b
ȷ	\jmath	√	\surd	♭	\flat	△	\triangle
ℓ	\ell	⊤	\top	♮	\natural	♣	\clubsuit
℘	\wp	⊥	\bot	♯	\sharp	◇	\diamondsuit
ℜ	\Re	∥	\\|	\	\backslash	♡	\heartsuit
ℑ	\Im	∠	\angle	∂	\partial	♠	\spadesuit
℧	\mho^b	.	.	|	|		

t6.gif

```
\ldots                  \cdots                  \vdots                  \ddots
\aleph                  \prime                  \forall                 \infty
\hbar                   \emptyset               \exists                 \Box$^b$
\imath                  \nabla                  \neg                    \Diamond$^b$
\jmath                  \surd                   \flat                   \triangle
\ell                    \top                    \natural                \clubsuit
\wp                     \bot                    \sharp                  \diamondsuit
\Re                     \|                      \backslash              \heartsuit
\Im                     \angle                  \partial                \spadesuit
\mho$^b$                .                       |
```

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Variable-sized Symbols

∑	\sum	⋂	\bigcap	⊙	\bigodot
∏	\prod	⋃	\bigcup	⊗	\bigotimes
∐	\coprod	⊔	\bigsqcup	⊕	\bigoplus
∫	\int	⋁	\bigvee	⊎	\biguplus
∮	\oint	⋀	\bigwedge		

Table 7: Variable-sized Symbols

t7.gif

```
\sum                    \bigcap                 \bigodot
\prod                   \bigcup                 \bigotimes
\coprod                 \bigsqcup               \bigoplus
\int                    \bigvee                 \biguplus
\oint                   \bigwedge
```

Log-like Symbols

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

Table 8: Log-like Symbols

t8.gif

```
\arccos     \cos       \csc       \exp       \ker         \limsup      \min       \sinh
\arcsin     \cosh      \deg       \gcd       \lg          \ln          \Pr        \sup
\arctan     \cot       \det       \hom       \lim         \log         \sec       \tan
\arg        \coth      \dim       \inf       \liminf      \max         \sin       \tanh
```

Delimiters

(	(	)	)	↑	\uparrow	⇑	\Uparrow
[	[	]	]	↓	\downarrow	⇓	\Downarrow
{	\{	}	\}	↕	\updownarrow	⇕	\Updownarrow
⌊	\lfloor	⌋	\rfloor	⌈	\lceil	⌉	\rceil
⟨	\langle	⟩	\rangle	/	/	\	\backslash
|	|	‖	\\|			

Table 9: Delimiters

t9.gif

```
(                   )                   \uparrow            \Uparrow
[                   ]                   \downarrow          \Downarrow
\{                  \}                  \updownarrow        \Updownarrow
\lfloor             \rfloor             \lceil              \rceil
\langle             \rangle             /                   \backslash
|                   \|
```

Large Delimiters

⎱	\rmoustache	⎰	\lmoustache	⟯	\rgroup	⟮	\lgroup
⎪	\arrowvert	‖	\Arrowvert	⎪	\bracevert		

Table 10: Large Delimiters

t10.gif

```
\rmoustache         \lmoustache         \rgroup             \lgroup
\arrowvert          \Arrowvert          \bracevert
```

Math mode accents

$\hat{a}$	\hat{a}	$\acute{a}$	\acute{a}	$\bar{a}$	\bar{a}	$\dot{a}$	\dot{a}	$\breve{a}$	\breve{a}
$\check{a}$	\check{a}	$\grave{a}$	\grave{a}	$\vec{a}$	\vec{a}	$\ddot{a}$	\ddot{a}	$\tilde{a}$	\tilde{a}

Table 11: Math mode accents

t11.gif

```
\hat{a}          \acute{a}        \bar{a}          \dot{a}          \breve{a}
\check{a}        \grave{a}        \vec{a}          \ddot{a}         \tilde{a}
```

Some other constructions

$\widetilde{abc}$	\widetilde{abc}	$\widehat{abc}$	\widehat{abc}
$\overleftarrow{abc}$	\overleftarrow{abc}	$\overrightarrow{abc}$	\overrightarrow{abc}
$\overline{abc}$	\overline{abc}	$\underline{abc}$	\underline{abc}
$\overbrace{abc}$	\overbrace{abc}	$\underbrace{abc}$	\underbrace{abc}
$\sqrt{abc}$	\sqrt{abc}	$\sqrt[n]{abc}$	\sqrt[n]{abc}
f'	f'	$\frac{abc}{xyz}$	\frac{abc}{xyz}

Table 12: Some other constructions

t12.gif

```
\widetilde{abc}          \widehat{abc}
\overleftarrow{abc}      \overrightarrow{abc}
\overline{abc}           \underline{abc}
\overbrace{abc}          \underbrace{abc}
\sqrt{abc}               \sqrt[n]{abc}
$f'$                     \frac{abc}{xyz}
```