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
+                   -

$^b$ Not predefined in a format based on {\tt basefont.tex}.
     Use one of the style options
     {\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$^b$
```

```
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```

Miscellaneous Symbols

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

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