TexPoint Font and Symbol Matters

- TexPoint comes with a set of TrueType fonts that contain the glyphs for the standard Latex and AMS symbols. Some of these symbols are also available in Windows standard fonts.
    - If you set the configuration flag "Use AMS Symbols" then all symbols are taken from Latex fonts.
    - If the flag is not set then the symbols are taken from the Windows font, if defined, or you get an error if the symbol is not defined

- The next few slides show the available symbols and the macros that expand to them. In each table the columns labeled T show the macro expansion if the AMS symbols are used and the column W shows the symbols from the default Windows fonts, when available

Symbol Macros Defined in TexPoint (1)

- Greek letters (T=AMS, W=Windows).

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

Symbol Macros Defined in TexPoint (2)

- Caligraphic and blackboard capital letters (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W	Name	T	W
cA	$\mathcal{A}$	$\mathcal{A}$	cO	$\mathcal{O}$	$\mathcal{O}$	bbA	$\mathbb{A}$	$\mathbb{A}$	bbO	$\mathbb{O}$	$\mathbb{O}$
cB	$\mathcal{B}$	$\mathcal{B}$	cP	$\mathcal{P}$	$\mathcal{P}$	bbB	$\mathbb{B}$	$\mathbb{B}$	bbP	$\mathbb{P}$	$\mathbb{P}$
cC	$\mathcal{C}$	$\mathcal{C}$	cQ	$\mathcal{Q}$	$\mathcal{Q}$	bbC	$\mathbb{C}$	$\mathbb{C}$	bbQ	$\mathbb{Q}$	$\mathbb{Q}$
cD	$\mathcal{D}$	$\mathcal{D}$	cR	$\mathcal{R}$	$\mathcal{R}$	bbD	$\mathbb{D}$	$\mathbb{D}$	bbR	$\mathbb{R}$	$\mathbb{R}$
cE	$\mathcal{E}$	$\mathcal{E}$	cS	$\mathcal{S}$	$\mathcal{S}$	bbE	$\mathbb{E}$	$\mathbb{E}$	bbS	$\mathbb{S}$	$\mathbb{S}$
cF	$\mathcal{F}$	$\mathcal{F}$	cT	$\mathcal{T}$	$\mathcal{T}$	bbF	$\mathbb{F}$	$\mathbb{F}$	bbT	$\mathbb{T}$	$\mathbb{T}$
cG	$\mathcal{G}$	$\mathcal{G}$	cU	$\mathcal{U}$	$\mathcal{U}$	bbG	$\mathbb{G}$	$\mathbb{G}$	bbU	$\mathbb{U}$	$\mathbb{U}$
cH	$\mathcal{H}$	$\mathcal{H}$	cV	$\mathcal{V}$	$\mathcal{V}$	bbH	$\mathbb{H}$	$\mathbb{H}$	bbV	$\mathbb{V}$	$\mathbb{V}$
cI	$\mathcal{I}$	$\mathcal{I}$	cX	$\mathcal{X}$	$\mathcal{X}$	bbI	$\mathbb{I}$	$\mathbb{I}$	bbX	$\mathbb{X}$	$\mathbb{X}$
cJ	$\mathcal{J}$	$\mathcal{J}$	cY	$\mathcal{Y}$	$\mathcal{Y}$	bbJ	$\mathbb{J}$	$\mathbb{J}$	bbY	$\mathbb{Y}$	$\mathbb{Y}$
cK	$\mathcal{K}$	$\mathcal{K}$	cZ	$\mathcal{Z}$	$\mathcal{Z}$	bbK	$\mathbb{K}$	$\mathbb{K}$	bbZ	$\mathbb{Z}$	$\mathbb{Z}$
cL	$\mathcal{L}$	$\mathcal{L}$				bbL	$\mathbb{L}$	$\mathbb{L}$			
cM	$\mathcal{M}$	$\mathcal{M}$				bbM	$\mathbb{M}$	$\mathbb{M}$			
cN	$\mathcal{N}$	$\mathcal{N}$				bbN	$\mathbb{N}$	$\mathbb{N}$			

Symbol Macros Defined in TexPoint (3)

- Miscellaneous symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
ldots			vdots	⋮	⋮	aleph	ℵ	ℵ
prime	′		infty	∞	∞	emptyset	∅	
exists	∃	∃	surd			triangle	△	
Diamond	◇		jmath	√		neg	¬	¬
top	⊤		natural			wp		
bot	⊥	⊥	diamondsuit	♦	♦	spadesuit	♠	♠
mho	℧		Im	ℑ	ℑ	partial	∂	∂
cdots	⋯	⋯	ddots	⋱	⋱	triangledown	▽	
forall	∀	∀	hbar	ℏ	ℏ	circledS	Ⓢ	
nabla	∇	∇	Box	□	□	nexists	∄	
imath			ll	≪		Game	⅁	
flat			sharp			varnothing	∅	
clubsuit	♣	♣	heartsuit	♡	♥	blacksquare	■	
Re	ℜ	ℜ	angle	∠	∠	diagup	╱	

Symbol Macros Defined in TexPoint (4)

- Miscellaneous symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
hslash	ℏ		blacktriangledown	▼				
square	□		bigstar	★				
angle	∠	∠	eth	ð				
mho	℧		int	∫	∫			
Bbbk	𝕜		parag	§				
blacktriangle	▲		blackparag	¶				
blacklozenge	◆		maltese	✠				
Complement	∁		times	×				
diagdown	╲							
vartriangle								
lozenge	◇							
measuredangle	∡							
Finv	Ⅎ							
backprime	‵							

Symbol Macros Defined in TexPoint (5)

- Binary symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
pm	$\pm$	$\pm$	mp	$\mp$	$\mp$	unlhd		
div	$\div$	$\div$	ast	$*$		unrhd		
circ	$\circ$	$\circ$	bullet	$\bullet$	$\bullet$	oplus	$\oplus$	$\oplus$
cap	$\cap$	$\cap$	cup	$\cup$	$\cup$	ominus	$\ominus$	
sqcap	$\sqcap$		sqcup	$\sqcup$		otimes	$\nwarrow$	$\otimes$
wedge	$\cap$	$\wedge$	setminus	$\setminus$		oslash	$\oslash$	
diamond	$\diamond$	$\diamond$	bigtriangleup	$\triangle$		odot	$\odot$	
leq	$\leq$	$\leq$	bigtriangledown	$\triangledown$		bigcirc	$\bigcirc$	
succ	$\succ$	$\succ$	triangleleft	$\triangleleft$	$\triangleleft$	dagger	$\dagger$	
simeq	$\simeq$		triangleright	$\triangleright$		ddagger	$\ddagger$	
parallel	$\parallel$		lhd			amalg	$\amalg$	
subseteq	$\subseteq$	$\subseteq$	rhd			geq	$\geq$	$\geq$
sqsupset	$\sqsupset$		doteq			sim	$\sim$	$\sim$

Symbol Macros Defined in TexPoint (6)

- More Binary Symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
mid	$\mid$	$\mid$	dashv	$\dashv$		bowtie		
subset	$\subset$	$\subset$	models	$\models$		sqsubset	$\sqsubset$	
supseteq	$\supseteq$	$\supseteq$	preceq	$\preceq$		sqsupseteq	$\sqsupseteq$	
neq	$\neq$	$\neq$	gg	$\gg$		propto	$\propto$	$\propto$
frown			approx	$\approx$	$\approx$	vDash	$\vDash$	
vdash	$\vdash$		Join			smallfrown	$\frown$	
equiv	$\equiv$	$\equiv$	sqsubseteq	$\sqsubseteq$		geqq	$\geqq$	
perp	$\perp$	$\perp$	ni	$\ni$		gtrsim	$\gtrsim$	
ll	$\ll$		prec	$\prec$	$\prec$	ggg	$\ggg$	
supset	$\supset$	$\supset$	succeq	$\succeq$		gtreqqless	$\gtreqqless$	
cong	$\cong$	$\cong$	asymp	$\asymp$		triangleq	$\triangleq$	
smile			<			supseteqq	$\supseteqq$	
in	$\in$	$\in$	>			succcurlyeq	$\succcurlyeq$	

Symbol Macros Defined in TexPoint (7)

- More binary symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
succapprox	⪷		Vvdash	⊪		blacktriangleright	►	
Vdash	⊩		bumpeq	≏		blacktriangleleft	◄	
leqq	≦		geqslant	⩾		vartriangleright		
lesssim	≲		gtrapprox	⪆		lesseqgtr	⋚	
lessdot	⋖		gtrless	≷		risingdotseq	≓	
eqslantless	⪕		eqcirc	≖		backsimeq	⋍	
approxeq	≊		thicksim	∼		sqsubset	⊏	
lessgtr	≶		Supset	⋑		precsim	≾	
doteqdot	≑		curlyeqsucc	⋟		trianglelefteq	⊴	
backsim	∽		between	≬		smallsmile	⌣	
Subset	⋐		shortmid	∣		Bumpeq	≎	
curlyeqprec	⋞		pitchfork	⋔		eqslantgtr	⪖	
vartriangleleft			therefore	∴	∴	gtrdot	⋗	

Symbol Macros Defined in TexPoint (8)

- More binary symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
gtreqless	⪌		fallingdotseq	≒		barwedge	⊼	
circeq	≗		subseteqq	⊆		boxminus	⊟	
thickapprox	≈		preccurlyeq	≼		boxplus	⊞	
sqsupset	⊐		precapprox	⪷		rtimes	⋊	
succsim	≿		dotplus	∔		curlywedge	⋏	
trianglerighteq	⊵		Cup	⋓		circledast	⊛	
shortparallel	∥		doublebarwedge	⩞		intercal	⊺	
varpropto	∝		boxdot	⊡		Cap	⋒	
backepsilon			ltimes	⋉		veebar	⊻	
leqslant	⩽		rightthreetimes	⋌		boxtimes	⊠	
lessapprox	⪅		circleddash	⊝		divideontimes	⋇	
lll	⋘		centerdot	·		leftthreetimes	⋋	
lesseqqgtr	⪋		smallsetminus	∖		curlyvee	⋎	

Symbol Macros Defined in TexPoint (9)

- More binary symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
circledcirc	⊚		subseteqplus	⫅		Ydown	⅄	
circledR	®		supseteqplus	⫆		Yleft	≺	
circledS	Ⓢ		curlywedgeuparrow	⋏		Yright	≻	
interleave	⫴		curlywedgedownarrow	⋏		Yup	⋏	
eqsim	≂		curlyveeuparrow	⋎		baro	⏀	
fatsemi	⨟		curlyveedownarrow	⋎		minuso	⦵	
merge	⋀		leftslice	⊲		sslash	⫽	
llparenthesis	⦇		rightslice	⊳		bbslash	⟍	
rrparenthesis	⦈		olessthan	⧀				
niplus	⨥		ogreatherthan	⧁				
inplus	⋿		ovee	⩝				
supsetplus	⪦		owedge	⩜				
subsetplus	⪥		obar	⦶				

Symbol Macros Defined in TexPoint (10)

- Delimiters (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
lfloor	⌊	⌊	llbracket	⟦				
langle	⟨	⟨	rrbracket	⟧				
rfloor	⌋	⌋	llparenthesis	⦅				
rangle	⟩	⟩	rrparenthesis	⦆				
lceil	⌈	⌈	llfloor	⌊⌊				
rceil	⌉	⌉	rrfloor	⌋⌋				
lbrace	{		llceil	⌈⌈				
rbrace	}		rrceil	⌉⌉				
ulcorner	⌜							
urcorner	⌝							
llcorner	⌞							
lrcorner	⌟							
talloblong	⫾							

Symbol Macros Defined in TexPoint (11)

- Arrow Symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
leftarrow	←	←	uparrow	↑	↑	multimap	⊸	
Leftarrow	⇐	⇐	Uparrow	⇑	⇑	rightleftarrows	⇄	
rightarrow	→	→	downarrow	⇓	↓	twoheadrightarrow	↠	
Rightarrow	⇒	⇒	Downarrow	⇓	⇓	rightleftharpoons	⇌	
leftrightarrow	↔	↔	updownarrow	↕	↕	Rsh	↱	
Leftrightarrow	⇔	⇔	Updownarrow	⇕		downharpoonright	⇂	
dashrightarrow			nearrow	↗		dashleftarrow		
hookleftarrow			searrow	↘		Lleftarrow	⇚	
upharpoonleft	↿		swarrow	↙		looparrowleft	↫	
downharpoonleft	⇃		nwarrow	↖		circlearrowleft	↺	
hookrightarrow			curvearrowleft	↶		upharpoonleft	↿	
upharpoonright	↾		upuparrows			leftrightsquigarrow	↭	
downharpoonright	⇂		mapsto	↦	↦	rightrightarrows	⇉	
leftrightarrows	⇆		leftarrowtail	↢		curvearrowright	↷	

Symbol Macros Defined in TexPoint (12)

- Arrow symbols and negated arrow symbols (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
downdownarrows	⇊		checkmark	✓		nleftarrow	↚	
rightsquigarrow	⇝		rightarrowtriangle			nrightarrow	↛	
leftleftarrows	⇇		leftarrowtriangle			nLeftarrow	⇍	
twoheadleftarrow	↞		leftrightarrowtriangle			nRightarrow	⇏	
leftrightharpoons	⇋		upuparrows	⇈		nleftrightarrow	↮	
Lsh	↰					nLeftrightarrow	⇎	
downharpoonleft	⇃							
rightrightarrows	⇉							
rightleftarrows	⇄							
looparrowright	↬							
circlearrowright	↻							
upharpoonright	↾							
Rrightarrow	⇛							
Lleftarrow	⇚							

Symbol Macros Defined in TexPoint (13)

- Negated binary relations (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
nless	≮		nVDash	⊮		nsucc	⊁	
nleq	≰		nsupseteq	⊉		succnapprox	⪰̸	
lvertneqq	≨		varsupsetneq	⊋		nparallel	∦	
nprec	⊀		nleq	≰		ntriangleright	⋫	
precnapprox	⪵		lneq	≨		nsupseteqq	⊉	
nmid	∤		lnsim	⋦		supsetneqq	⊋	
ntriangleleft	⋪		npreceq	⋠		nleqslant	≰	
subsetneq	⊊		nsim	≁		lneqq	≨	
varsubsetneqq	⊊		nvdash	⊬		lnapprox	⪅	
ngeqslant	≱		ntrianglelefteq	⋬		precnsim	⋨	
gneqq	≩		varsubsetneq	⊊		nshortmid	∤	
gnapprox	⪈		ngtr	≯		nvDash	⊭	
succsim	≿		ngeqq	≱		nsubseteq	⊈	
nshortparallel	∦		gvertneqq	≩		subsetneqq	⊊	

Symbol Macros Defined in TexPoint (14)

- More negated binary relations (T=AMS, W=Windows).

Name	T	W	Name	T	W	Name	T	W
ngeq	≱							
gneq	⪈							
gnsim	⋧							
nsucceq	⋡							
ncong	≇							
nvDash	⊭							
ntrianglerighteq	⋭							
supsetneq	⊋							
varsupsetneqq	⫌							
nleqq	≰							