myquestionbox

List of Latex Symbols commonly used for course development at myquestionbox.com

Greek letters

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

Unary operators

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
+	+		−	-	negation	!	!	factorial	#	\#	primorial
			¬	\neg	not						

Relation operators

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
$<$	`<`	is less than	$>$	`>`	is greater than
$\not<$	`\nless`	is not less than	$\not>$	`\ngtr`	is not greater than
$\leq$	`\leq`	is less than or equal to	$\geq$	`\geq`	is greater than or equal to
$\leqslant$	`\leqslant`	is less than or equal to	$\geqslant$	`\geqslant`	is greater than or equal to
$\not\leq$	`\nleq`	is neither less than nor equal to	$\not\geq$	`\ngeq`	is neither greater than nor equal to
$\not\leqslant$	`\nleqslant`	is neither less than nor equal to	$\not\geqslant$	`\ngeqslant`	is neither greater than nor equal to
$\prec$	`\prec`	precedes	$\succ$	`\succ`	succeeds
$\not\prec$	`\nprec`	doesn't precede	$\not\succ$	`\nsucc`	doesn't succeed
$\preceq$	`\preceq`	precedes or equals	$\succeq$	`\succeq`	succeeds or equals
$\not\preceq$	`\npreceq`	neither precedes nor equals	$\not\succeq$	`\nsucceq`	neither succeeds nor equals
$\ll$	`\ll`		$\gg$	`\gg`	
$\lll$	`\lll`		$\ggg$	`\ggg`	
$\subset$	`\subset`	is a proper subset of	$\supset$	`\supset`	is a proper superset of
$\not\subset$	`\not\subset`	is not a proper subset of	$\not\supset$	`\not\supset`	is not a proper superset of
$\subseteq$	`\subseteq`	is a subset of	$\supseteq$	`\supseteq`	is a superset of
$\not\subseteq$	`\nsubseteq`	is not a subset of	$\not\supseteq$	`\nsupseteq`	is not a superset of
$\sqsubset$	`\sqsubset`		$\sqsupset$	`\sqsupset`	
$\sqsubseteq$	`\sqsubseteq`		$\sqsupseteq$	`\sqsupseteq`	

Symbol	LaTeX	Comment
$=$	`=`	is equal to
$\doteq$	`\doteq`	
$\equiv$	`\equiv`	is equivalent to
$\approx$	`\approx`	is approximately
$\cong$	`\cong`	is congruent to
$\simeq$	`\simeq`	is similar or equal to
$\sim$	`\sim`	is similar to
$\propto$	`\propto`	is proportional to
$\neq$ or $\neq$	`\neq` or `\ne`	is not equal to

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
$\parallel$	\parallel	is parallel with	$\nparallel$	\nparallel	is not parallel with
$\asymp$	\asymp	is asymptotic to	$\bowtie$	\bowtie	
$\vdash$	\vdash		$\dashv$	\dashv	
$\in$	\in	is member of	$\ni$	\ni	owns, has member
$\smile$	\smile		$\frown$	\frown	
$\models$	\models	models	$\notin$	\notin	is not member of
$\perp$	\perp	is perpendicular with	$\mid$	\mid	divides

Binary operators

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
$\pm$	\pm	plus or minus	$\cap$	\cap	set intersection	$\diamond$	\diamond		$\oplus$	\oplus	
$\mp$	\mp	minus or plus	$\cup$	\cup	set union	$\triangle$	\bigtriangleup		$\ominus$	\ominus	
$\times$	\times	multiplied by	$\uplus$	\uplus	multiset addition	$\triangledown$	\bigtriangledown		$\otimes$	\otimes	
$\div$	\div	divided by	$\sqcap$	\sqcap		$\triangleleft$	\triangleleft		$\oslash$	\oslash	
$*$	\ast	asterisk	$\sqcup$	\sqcup		$\triangleright$	\triangleright		$\odot$	\odot	
$\star$	\star		$\vee$	\vee		$\bigcirc$	\bigcirc		$\circ$	\circ	
$\dagger$	\dagger		$\wedge$	\wedge		$\bullet$	\bullet		$\setminus$	\setminus	set difference
$\ddagger$	\ddagger		$\cdot$	\cdot		$\wr$	\wr		$\amalg$	\amalg	

Negated binary operators

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
$\neq$ or $\neq$	\neq or \ne	is not equal to	$\notin$	\notin	is not member of
$\not<$	\nless	is not less than	$\not>$	\ngtr	is not greater than
$\not\leq$	\nleq	is not less than or equal to	$\not\geq$	\ngeq	is not greater than or equal to
$\not\leqslant$	\nleqslant		$\not\geqslant$	\ngeqslant	
$\not\leqq$	\nleqq		$\not\geqq$	\ngeqq	
$\lneq$	\lneq		$\gneq$	\gneq	
$\lneqq$	\lneqq		$\gneqq$	\gneqq	
$\lvertneqq$	\lvertneqq		$\gvertneqq$	\gvertneqq	
$\lnsim$	\lnsim		$\gnsim$	\gnsim	
$\lnapprox$	\lnapprox		$\gnapprox$	\gnapprox	
$\not\prec$	\nprec	does not precede	$\not\succ$	\nsucc	does not succeed
$\not\preceq$	\npreceq	neither precedes nor equals	$\not\succeq$	\nsucceq	neither succedes nor equals
$\precneqq$	\precneqq		$\succneqq$	\succneqq	
$\precnsim$	\precnsim		$\succnsim$	\succnsim	
$\precnapprox$	\precnapprox		$\succnapprox$	\succnapprox	
$\not\sim$	\nsim	is not similar to	$\not\cong$	\ncong	is not congruent to
$\nshortmid$	\nshortmid		$\nshortparallel$	\nshortparallel	
$\nmid$	\nmid		$\nparallel$	\nparallel	is not parallel with

⊬	\nvdash		⊭	\nvDash	
⊮	\nVdash		⊯	\nVDash	
⋪	\ntriangleleft		⋫	\ntriangleright	
⋬	\ntrianglelefteq		⋭	\ntrianglerighteq	
⊈	\nsubseteq		⊉	\nsupseteq	
⫅̸	\nsubseteqq		⫆̸	\nsupseteqq	
⊊	\subsetneq		⊋	\supsetneq	
⫋	\varsubsetneq		⫌	\varsupsetneq	
⫋̸	\subsetneqq		⫌̸	\supsetneqq	
⫋̸	\varsubsetneqq		⫌̸	\varsupsetneqq	

Set notation

Symbol	LaTeX	Comment
∅ or ∅ , and ∅	\O or \emptyset, and \varnothing	the empty set
ℕ	\N	set of natural numbers
ℤ	\Z	set of integers
ℚ	\Q	set of rational numbers
𝔸	\mathbb{A}	set of algebraic numbers
ℝ	\R	set of real numbers
ℂ	\C	set of complex numbers
ℍ	\mathbb{H}	set of quaternions
𝕆	\mathbb{O}	set of octonions
𝕊	\mathbb{S}	set of sedenions
∈	\in	is member of
∉	\notin	is not member of
∋	\ni	owns (has member)
⊂	\subset	is proper subset of
⊆	\subseteq	is subset of
⊃	\supset	is proper superset of
⊇	\supseteq	is superset of
∪	\cup	set union
∩	\cap	set intersection
∖	\setminus	set difference

Logic notation

Symbol	LaTeX	Comment
$\exists$	\exists	there exists at least one
$\exists!$	\exists!	there exists one and only one
$\nexists$	\nexists	there is no
$\forall$	\forall	for all
$\neg$	\neg	not (logical not)
$\lor$	\lor	or (logical or)
$\land$	\land	and (logical and)
$\longrightarrow$ or $\Longrightarrow$	\Longrightarrow or \implies	implies
$\Rightarrow$	\Rightarrow	*(preferred for right implication)*
$\Longleftarrow$	\Longleftarrow	is implied by (only if)
$\Leftarrow$	\Leftarrow	*(preferred for left implication)*
$\iff$	\iff	is equivalent to (if and only if, iff)
$\Leftrightarrow$	\Leftrightarrow	*(preferred for equivalence)*
$\top$	\top	
$\bot$	\bot	

Geometry notation

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
$\overline{\mathrm{AB}}$	\overline{\rm AB}	segment	$\overrightarrow{\mathrm{AB}}$	\overrightarrow{\rm AB}	ray (half-line)
$\angle$	\angle	angle	$\measuredangle$	\measuredangle	measured angle
$\triangle$	\triangle	triangle	$\square$	\square	square
$\cong$	\cong	congruent (same shape and size)	$\ncong$	\ncong	not congruent
$\sim$	\sim	similar (same shape)	$\nsim$	\nsim	not similar
$\parallel$	|	is parallel with	$\nparallel$	\nparallel	is not parallel with
$\perp$	\perp	is perpendicular to	$\not\perp$	\not\perp	is not perpendicular to

Delimiters

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX
$\vert$	\vert	divides	$\Vert$	\\|	divides unitarily, is parallel with	/	/	slash	\	\backslash
(	(\,	left parenthesis	)	) \,	right parenthesis	[	[\,	left [square] bracket	]	] \,
{	\{	left brace	}	\}	right brace	$\langle$	\langle	left angle bracket	$\rangle$	\rangle
$\lceil$	\lceil	ceiling (left)	$\rceil$	\rceil	ceiling (right)	$\lfloor$	\lfloor	floor (left)	$\rfloor$	\rfloor
$\ulcorner$	\ulcorner		$\urcorner$	\urcorner		$\llcorner$	\llcorner		$\lrcorner$	\lrcorner

Arrows

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX
$\to$ or $\rightarrow$	\rightarrow or \to		$\Rightarrow$	\Rightarrow		$\longrightarrow$	\longrightarrow		$\Longrightarrow$	\Longrightarrow
$\mapsto$	\mapsto					$\longmapsto$	\longmapsto			
$\leftarrow$ or $\gets$	\leftarrow or \gets		$\Leftarrow$	\Leftarrow		$\longleftarrow$	\longleftarrow		$\Longleftarrow$	\Longleftarrow

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment
$\uparrow$	\uparrow	Knuth's up-arrow notation	$\Uparrow$	\Uparrow	
$\downarrow$	\downarrow		$\Downarrow$	\Downarrow	
$\updownarrow$	\updownarrow		$\Updownarrow$	\Updownarrow	

Other symbols

Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX	Comment	Symbol	LaTeX
∂	\partial	partial derivative	$\imath$	\imath		$\Re$	\Re	real part	∇	\nabla
$\eth$	\eth		$\jmath$	\jmath		$\Im$	\Im	imaginary part	$\Box$	\Box
$\hbar$	\hbar	reduced Planck's constant	ℓ	\ell		$\wp$	\wp	[Weierstrass] powerset	∞	\infty

Symbol	LaTeX	Symbol	LaTeX	Symbol	LaTeX	Symbol	LaTeX
$\sin$	\sin	$\arcsin$	\arcsin	$\csc$	\csc	arccsc	\arccsc
$\cos$	\cos	$\arccos$	\arccos	$\sec$	\sec	arcsec	\arcsec
$\tan$	\tan	$\arctan$	\arctan	$\cot$	\cot	arccot	\arccot

Symbol	LaTeX	Symbol	LaTeX	Symbol	LaTeX	Symbol	LaTeX
$\sinh$	\sinh	arsinh	\operatorname{arsinh}	csch	\operatorname{csch}	arcsch	\operatorname{arcsch}
$\cosh$	\cosh	arcosh	\operatorname{arcosh}	sech	\operatorname{sech}	arsech	\operatorname{arsech}
$\tanh$	\tanh	artanh	\operatorname{artanh}	$\coth$	\coth	arcoth	\operatorname{arcoth}