

Character	& entity ;	&# decimal ;	&#x hex ;	Description
"	"	"	"	quotation mark
&	&	&	&	ampersand = and
+		+	+	plus sign
<	<	<	<	less-than sign
>	>	>	>	greater-than sign
	 	 	 	non-breaking space
§	§	§	§	section sign
©	©	©	©	copyright sign
«	«	«	«	left-pointing double angle quotation mark = left pointing guillemet
¬	¬	¬	¬	not sign
®	®	®	®	registered trade mark sign
—	¯	¯	¯	macron = spacing macron = overline = APL overbar
°	°	°	°	degree sign
±	±	±	±	plus-minus sign = plus-or-minus sign
²	²	²	²	superscript two = superscript digit two = squared
³	³	³	³	superscript three = superscript digit three = cubed
μ	µ	µ	µ	micro sign
¶	¶	¶	¶	pilcrow sign = paragraph sign
·	·	·	·	middle dot = Georgian comma = Greek middle dot
ç	¸	¸	¸	cedilla = spacing cedilla
¹	¹	¹	¹	superscript one = superscript digit one
º	º	º	º	masculine ordinal indicator
»	»	»	»	right-pointing double angle quotation mark = right pointing guillemet
¼	¼	¼	¼	vulgar fraction one quarter
½	½	½	½	vulgar fraction one half
¾	¾	¾	¾	vulgar fraction three quarters
À	À	À	À	latin capital letter A with grave latin capital letter A grave
Á	Á	Á	Á	latin capital letter A with acute
Â	Â	Â	Â	latin capital letter A with circumflex
Ã	Ã	Ã	Ã	latin capital letter A with tilde
Ä	Ä	Ä	Ä	latin capital letter A with diaeresis
Å	Å	Å	Å	latin capital letter A with ring above = angstrom (0.1 nanometer)
Æ	Æ	Æ	Æ	latin capital letter/ligature AE
Ç	Ç	Ç	Ç	latin capital letter C with cedilla
È	È	È	È	latin capital letter E with grave

É	É	É	É	latin capital letter E with acute
Ê	Ê	Ê	Ê	latin capital letter E with circumflex
Ë	Ë	Ë	Ë	latin capital letter E with diaeresis
Ì	Ì	Ì	Ì	latin capital letter I with grave
Í	Í	Í	Í	latin capital letter I with acute
Î	Î	Î	Î	latin capital letter I with circumflex
Ï	Ï	Ï	Ï	latin capital letter I with diaeresis
Ð	Ð	Ð	Ð	latin capital letter ETH
Ñ	Ñ	Ñ	Ñ	latin capital letter N with tilde
Ò	Ò	Ò	Ò	latin capital letter O with grave
Ó	Ó	Ó	Ó	latin capital letter O with acute
Ô	Ô	Ô	Ô	latin capital letter O with circumflex
Õ	Õ	Õ	Õ	latin capital letter O with tilde
Ö	Ö	Ö	Ö	latin capital letter O with diaeresis
×	×	×	×	multiplication sign
Ø	Ø	Ø	Ø	latin capital letter O with stroke = latin capital letter O slash
Ù	Ù	Ù	Ù	latin capital letter U with grave
Ú	Ú	Ú	Ú	latin capital letter U with acute
Û	Û	Û	Û	latin capital letter U with circumflex
Ü	Ü	Ü	Ü	latin capital letter U with diaeresis
Ý	Ý	Ý	Ý	latin capital letter Y with acute
Þ	Þ	Þ	Þ	latin capital letter Thorn
ß	ß	ß	ß	latin small letter sharp s
à	à	à	à	latin small letter a with grave
á	á	á	á	latin small letter a with acute
â	â	â	â	latin small letter a with circumflex
ã	ã	ã	ã	latin small letter a with tilde
ä	ä	ä	ä	latin small letter a with diaeresis
å	å	å	å	latin small letter a with ring above
æ	æ	æ	æ	latin small letter/ligature ae
ç	ç	ç	ç	latin small letter c with cedilla
è	è	è	è	latin small letter e with grave
é	é	é	é	latin small letter e with acute
ê	ê	ê	ê	latin small letter e with circumflex
ë	ë	ë	ë	latin small letter e with diaeresis
ì	ì	ì	ì	latin small letter i with grave
í	í	í	í	latin small letter i with acute
î	î	î	î	latin small letter i with circumflex
ï	ï	ï	ï	latin small letter i with diaeresis

ð	ð	ð	ð	latin small letter eth
ñ	ñ	ñ	ñ	latin small letter n with tilde
ò	ò	ò	ò	latin small letter o with grave
ó	ó	ó	ó	latin small letter o with acute
ô	ô	ô	ô	latin small letter o with circumflex
õ	õ	õ	õ	latin small letter o with tilde
ö	ö	ö	ö	latin small letter o with diaeresis
÷	÷	÷	÷	division sign
ø	ø	ø	ø	latin small o with stroke
ù	ù	ù	ù	latin small letter u with grave
ú	ú	ú	ú	latin small letter u with acute
û	û	û	û	latin small letter u with circumflex
ü	ü	ü	ü	latin small letter u with diaeresis
ý	ý	ý	ý	latin small letter y with acute
þ	þ	þ	þ	latin small letter thorn
ÿ	ÿ	ÿ	ÿ	latin small letter y with diaeresis
Œ	Œ	Œ	Œ	latin capital ligature OE
œ	œ	œ	œ	latin small ligature oe
Š	Š	Š	Š	latin capital letter S with caron
š	š	š	š	latin small letter s with caron
ÿ	Ÿ	Ÿ	Ÿ	latin capital letter Y with diaeresis
f	ƒ	ƒ	ƒ	latin small f with hook = function = florin
Α	Α	Α	Α	greek capital letter Alpha
Β	Β	Β	Β	greek capital letter Beta
Γ	Γ	Γ	Γ	greek capital letter Gamma
Δ	Δ	Δ	Δ	greek capital letter Delta
Ε	Ε	Ε	Ε	greek capital letter Epsilon
Ζ	Ζ	Ζ	Ζ	greek capital letter Zeta
Η	Η	Η	Η	greek capital letter Eta
Θ	Θ	Θ	Θ	greek capital letter Theta
Ι	Ι	Ι	Ι	greek capital letter Iota
Κ	Κ	Κ	Κ	greek capital letter Kappa
Λ	Λ	Λ	Λ	greek capital letter Lambda
Μ	Μ	Μ	Μ	greek capital letter Mu
Ν	Ν	Ν	Ν	greek capital letter Nu
Ξ	Ξ	Ξ	Ξ	greek capital letter Xi
Ο	Ο	Ο	Ο	greek capital letter Omicron
Π	Π	Π	Π	greek capital letter Pi
Ρ	Ρ	Ρ	Ρ	greek capital letter Rho
Σ	Σ	Σ	Σ	greek capital letter Sigma

Τ	Τ	Τ	Τ	greek capital letter Tau
Υ	Υ	Υ	Υ	greek capital letter Upsilon
Φ	Φ	Φ	Φ	greek capital letter Phi
Χ	Χ	Χ	Χ	greek capital letter Chi
Ψ	Ψ	Ψ	Ψ	greek capital letter Psi
Ω	Ω	Ω	Ω	greek capital letter Omega
α	α	α	α	greek small letter alpha
β	β	β	β	greek small letter beta
γ	γ	γ	γ	greek small letter gamma
δ	δ	δ	δ	greek small letter delta
ε	ε	ε	ε	greek small letter epsilon
ζ	ζ	ζ	ζ	greek small letter zeta
η	η	η	η	greek small letter eta
θ	θ	θ	θ	greek small letter theta
ι	ι	ι	ι	greek small letter iota
κ	κ	κ	κ	greek small letter kappa
λ	λ	λ	λ	greek small letter lambda
μ	μ	μ	μ	greek small letter mu
ν	ν	ν	ν	greek small letter nu
ξ	ξ	ξ	ξ	greek small letter xi
ο	ο	ο	ο	greek small letter omicron
π	π	π	π	greek small letter pi
ρ	ρ	ρ	ρ	greek small letter rho
ς	ς	ς	ς	greek small letter final sigma
σ	σ	σ	σ	greek small letter sigma
τ	τ	τ	τ	greek small letter tau
υ	υ	υ	υ	greek small letter upsilon
φ	φ	φ	φ	greek small letter phi
χ	χ	χ	χ	greek small letter chi
ψ	ψ	ψ	ψ	greek small letter psi
ω	ω	ω	ω	greek small letter omega
Ϝ		Ϗ	Ϗ	greek capital Kai symbol (-IE?)
Ϛ		ϐ	ϐ	greek beta symbol
ϛ	ϑ	ϑ	ϑ	greek small letter theta symbol
ϝ		ϕ	ϕ	greek phi symbol
Ϟ	ϖ	ϖ	ϖ	greek pi symbol
ϙ		ϗ	ϗ	greek kai symbol
Ɔ		ẞ	ẞ	latin capital letter sharp S (-IE?)
–	–	–	–	en dash (half em)
—	—	—	—	em dash

		‖	‖	double vertical line = matrix norm
‘	‘	‘	‘	left single quotation mark
’	’	’	’	right single quotation mark
‚	‚	‚	‚	single low-9 quotation mark
“	“	“	“	left double quotation mark
”	”	”	”	right double quotation mark
„	„	„	„	double low-9 quotation mark
†	†	†	†	dagger
‡	‡	‡	‡	double dagger
•	•	•	•	bullet = black small circle
▸		‣	‣	triangular bullet = black small triangle
...	…	…	…	horizontal ellipsis = three dot leader
‰	‰	‰	‰	per mille sign
‱		‱	‱	per ten thousand sign = permyriad
◁	‹	‹	‹	single left-pointing angle quotation mark
▷	›	›	›	single right-pointing angle quotation mark
-		⁃	⁃	hyphen bullet
∴		⁝	⁝	tricolon = vertical ellipsis
⁰		⁰	⁰	superscript zero
ⁱ		ⁱ	ⁱ	superscript i
⁴		⁴	⁴	superscript four
⁵		⁵	⁵	superscript five
⁶		⁶	⁶	superscript six
⁷		⁷	⁷	superscript seven
⁸		⁸	⁸	superscript eight
⁹		⁹	⁹	superscript nine
⁺		⁺	⁺	superscript plus
⁻		⁻	⁻	superscript minus
ⁿ		ⁿ	ⁿ	superscript n
₀		₀	₀	subscript zero
₁		₁	₁	subscript one
₂		₂	₂	subscript two
₃		₃	₃	subscript three
₄		₄	₄	subscript four
₅		₅	₅	subscript five
₆		₆	₆	subscript six
₇		₇	₇	subscript seven
₈		₈	₈	subscript eight
₉		₉	₉	subscript nine
₊		₊	₊	subscript plus

-		₋	₋	subscript minus
ℂ		ℂ	ℂ	complex numbers, blackboard
ℵ		ℇ	ℇ	Euler constant
ℏ		ℎ	ℎ	Planck constant
ℏ		ℏ	ℏ	Planck constant over 2π
ℑ	ℑ	ℑ	ℑ	blackletter capital I = imaginary part of complex number
ℕ		ℕ	ℕ	natural numbers = {1, 2, 3, ...} or {0, 1, 2, 3, ...}, blackboard
ℙ	℘	℘	℘	script capital P = power set = Weierstraß P
ℚ		ℚ	ℚ	rational numbers = integer fractions, blackboard
ℜ	ℜ	ℜ	ℜ	blackletter capital R = real part of complex number
ℝ		ℝ	ℝ	real numbers = the continuum, blackboard
™	™	™	™	trade mark sign
ℤ		ℤ	ℤ	integers = {..., -3, -2, -1, 0, 1, 2, 3, ...}, blackboard
ℵ	ℵ	ℵ	ℵ	Hebrew alef = first transfinite cardinal
ב		ℶ	ℶ	Hebrew bet
ג		ℷ	ℷ	Hebrew gimel
ד		ℸ	ℸ	Hebrew dalet
<i>i</i>		ⅈ	ⅈ	sometimes the imaginary unit (i), blackboard
←	←	←	←	leftwards arrow
↑	↑	↑	↑	upwards arrow
→	→	→	→	rightwards arrow
↓	↓	↓	↓	downwards arrow
↔	↔	↔	↔	left right arrow
↕		↕	↕	up down arrow
↪		↦	↦	rightwards arrow from bar = from domain to range (function)
⤵		↯	↯	downwards zigzag arrow = electrolysis
↩	↵	↵	↵	downwards arrow with corner leftwards = carriage return
↶		↶	↶	anticlockwise top semicircle arrow
↷		↷	↷	clockwise top semicircle arrow
↺		↺	↺	anticlockwise open circle arrow
↻		↻	↻	clockwise open circle arrow
⇐	⇐	⇐	⇐	leftwards double arrow
⇑	⇑	⇑	⇑	upwards double arrow
⇒	⇒	⇒	⇒	rightwards double arrow = implies
⇓	⇓	⇓	⇓	downwards double arrow
⇔	⇔	⇔	⇔	left right double arrow = bi-implication
⇕		⇕	⇕	up down double arrow

\forall	<code>&forall;</code>	<code>&#8704;</code>	<code>&#x2200;</code>	for all = universal quantifier
∂	<code>&part;</code>	<code>&#8706;</code>	<code>&#x2202;</code>	partial differential
\exists	<code>&exist;</code>	<code>&#8707;</code>	<code>&#x2203;</code>	there exists = existential quantifier
\nexists		<code>&#8708;</code>	<code>&#x2204;</code>	there does not exist
\emptyset	<code>&empty;</code>	<code>&#8709;</code>	<code>&#x2205;</code>	empty set = null set = diameter
Δ		<code>&#8710;</code>	<code>&#x2206;</code>	increment = Laplace operator = forward difference
∇	<code>&nabla;</code>	<code>&#8711;</code>	<code>&#x2207;</code>	nabla = backward difference
\in	<code>&isin;</code>	<code>&#8712;</code>	<code>&#x2208;</code>	element of
\notin	<code>&notin;</code>	<code>&#8713;</code>	<code>&#x2209;</code>	not an element of
\ni	<code>&ni;</code>	<code>&#8715;</code>	<code>&#x220B;</code>	contains as member
$\not\ni$		<code>&#8716;</code>	<code>&#x220C;</code>	does not contain as member
■		<code>&#8718;</code>	<code>&#x220E;</code>	end of proof = QED
\prod	<code>&prod;</code>	<code>&#8719;</code>	<code>&#x220F;</code>	n-ary product = product sign
\sum	<code>&sum;</code>	<code>&#8721;</code>	<code>&#x2211;</code>	n-ary summation
$-$	<code>&minus;</code>	<code>&#8722;</code>	<code>&#x2212;</code>	minus sign
$\sqrt{\quad}$	<code>&radic;</code>	<code>&#8730;</code>	<code>&#x221A;</code>	square root = radical sign
\propto	<code>&prop;</code>	<code>&#8733;</code>	<code>&#x221D;</code>	proportional to
∞	<code>&infin;</code>	<code>&#8734;</code>	<code>&#x221E;</code>	infinity
\angle	<code>&ang;</code>	<code>&#8736;</code>	<code>&#x2220;</code>	angle
\wedge	<code>&and;</code>	<code>&#8743;</code>	<code>&#x2227;</code>	logical and = wedge = conjunction
\vee	<code>&or;</code>	<code>&#8744;</code>	<code>&#x2228;</code>	logical or = vee = disjunction
\cap	<code>&cap;</code>	<code>&#8745;</code>	<code>&#x2229;</code>	intersection = cap
\cup	<code>&cup;</code>	<code>&#8746;</code>	<code>&#x222A;</code>	union = cup
\int	<code>&int;</code>	<code>&#8747;</code>	<code>&#x222B;</code>	integral
\therefore	<code>&there4;</code>	<code>&#8756;</code>	<code>&#x2234;</code>	therefore
\because		<code>&#8757;</code>	<code>&#x2235;</code>	because
\sim	<code>&sim;</code>	<code>&#8764;</code>	<code>&#x223C;</code>	tilde operator = varies with = similar to
\cong	<code>&cong;</code>	<code>&#8773;</code>	<code>&#x2245;</code>	approximately equal to
\approx	<code>&asymp;</code>	<code>&#8776;</code>	<code>&#x2248;</code>	almost equal to = asymptotic to
\neq	<code>&ne;</code>	<code>&#8800;</code>	<code>&#x2260;</code>	not equal to
\equiv	<code>&equiv;</code>	<code>&#8801;</code>	<code>&#x2261;</code>	identical to
\leq	<code>&le;</code>	<code>&#8804;</code>	<code>&#x2264;</code>	less-than or equal to
\geq	<code>&ge;</code>	<code>&#8805;</code>	<code>&#x2265;</code>	greater-than or equal to
\subset	<code>&sub;</code>	<code>&#8834;</code>	<code>&#x2282;</code>	subset of
\supset	<code>&sup;</code>	<code>&#8835;</code>	<code>&#x2283;</code>	superset of
$\not\subset$	<code>&nsub;</code>	<code>&#8836;</code>	<code>&#x2284;</code>	not a subset of
$\not\supset$		<code>&#8837;</code>	<code>&#x2285;</code>	not a superset of
\subseteq	<code>&sube;</code>	<code>&#8838;</code>	<code>&#x2286;</code>	subset of or equal to
\supseteq	<code>&supe;</code>	<code>&#8839;</code>	<code>&#x2287;</code>	superset of or equal to

\square		⊏	⊏	square image of (relation)
\sqsupset		⊐	⊐	square original of (relation)
\oplus	⊕	⊕	⊕	circled plus = direct sum
\otimes	⊗	⊗	⊗	circled times = vector product
\dashv		⊢	⊢	right tack = reducible = yields
\dashv		⊣	⊣	left tack = non-theorem = does not yield
\dashv		⊤	⊤	down tack = raised interpolation marker
\perp	⊥	⊥	⊥	up tack = orthogonal to = perpendicular
\vdash		⊦	⊦	assertion = reduces to
\models		⊧	⊧	models
\vDash		⊨	⊨	true = tautology
\nVdash		⊭	⊭	not true
\triangleleft		⊲	⊲	normal subgroup of
\triangleright		⊳	⊳	contains as normal subgroup
\trianglelefteq		⊴	⊴	normal subgroup of or equal to
\trianglerighteq		⊵	⊵	contains as normal subgroup or equal to
\cdot	⋅	⋅	⋅	dot operator
\ntriangleleft		⋪	⋪	not normal subgroup of
\ntriangleright		⋫	⋫	does not contain as normal subgroup
\ntrianglelefteq		⋬	⋬	not normal subgroup of or equal to
\ntrianglerighteq		⋭	⋭	does not contain as normal subgroup or equal
\triangle		⌂	⌂	house
\lceil	⌈	⌈	⌈	left ceiling = apl upstile
\rceil	⌉	⌉	⌉	right ceiling
\lfloor	⌊	⌊	⌊	left floor = apl downstile
\rfloor	⌋	⌋	⌋	right floor
\lrcorner		⌌	⌌	bottom right crop
\llcorner		⌍	⌍	bottom left crop
\ulcorner		⌎	⌎	top right crop
\urcorner		⌏	⌏	top left crop
\square		⌑	⌑	square lozenge
\oplus		⌖	⌖	position indicator
\langle	⟨	〈	〈	left-pointing angle bracket = bra (-IE?)
\rangle	⟩	〉	〉	right-pointing angle bracket = ket (-IE?)
$\text{\textcircled{C}}$		⌬	⌬	benzene ring
$\text{\textcircled{O}}$		⏣	⏣	benzene ring with circle
\textbar		─	─	box drawings light horizontal
\textbar		│	│	box drawings light vertical
\textbar		┌	┌	box drawings light down and right

⌋		┐	┐	box drawings light down and left
⌌		└	└	box drawings light up and right
⌍		┘	┘	box drawings light up and left
⌎		├	├	box drawings light vertical and right
⌏		┤	┤	box drawings light vertical and left
⌐		┬	┬	box drawings light down and horizontal
⌑		┴	┴	box drawings light up and horizontal
⌒		┼	┼	box drawings light vertical and horizontal
↷		╭	╭	box drawings light arc down and right
↶		╮	╮	box drawings light arc down and left
↷		╯	╰	box drawings light arc up and right
↶		╰	╰	box drawings light arc up and right
■		■	■	black square = sometimes end of text
□		□	□	white square = quadrature = necessarily (modal logic)
▲		▲	▲	black up-pointing triangle
△		△	△	white up-pointing triangle
▶		▶	▶	black right-pointing triangle (-IE?)
▷		▷	▷	white right-pointing triangle (-IE?)
▼		▼	▼	black down-pointing triangle
▽		▽	▽	white down-pointing triangle
◀		◀	◀	black left-pointing triangle (-IE?)
◁		◁	◁	white left-pointing triangle (-IE?)
◇	◊	◊	◊	lozenge = white diamond suit = possibly (modal logic)
◦		◦	◦	white bullet
☎		☎	☎	black telephone
☎		☏	☏	white telephone
☺		☺	☺	white smiley
♀		♀	♀	female sign (Venus)
♂		♂	♂	male sign (Mars)
♠	♠	♠	♠	black spade suit
♣	♣	♣	♣	black club suit = shamrock
♥	♥	♥	♥	black heart suit = valentine
♦	♦	♦	♦	black diamond suit
⚔		⚔	⚔	crossed swords
☢		⚛	⚛	atom symbol = nuclear installation
⚡		⚡	⚡	high voltage sign = sometimes reductio ad absurdum

✉		✉	✉	envelope = mail
✓		✓	✓	check mark = affirmation
✕		✗	✗	ballot x
❖		❖	❖	black diamond minus white x
‘		❛	❛	heavy single turned comma quotation mark ornament (left)
’		❜	❜	heavy single comma quotation mark ornament (right)
“		❝	❝	heavy double turned comma quotation mark ornament (left)
”		❞	❞	heavy double comma quotation mark ornament (right)
¶		❡	❡	curved stem paragraph sign ornament
➔		➔	➔	heavy wide-headed rightwards arrow
➤		➛	➛	drafting point rightwards arrow
➤		➤	➤	black rightwards arrowhead
⌈		⟦	⟦	left white square bracket
⌋		⟧	⟧	right white square bracket
⌠		⟨	⟨	mathematical left angle bracket
⌡		⟩	⟩	mathematical right angle bracket
↻		⟲	⟲	anticlockwise gapped circle arrow
🔄		⟳	⟳	clockwise gapped circle arrow
🕒		⥀	⥀	anticlockwise closed circle arrow
🕒		⥁	⥁	clockwise closed circle arrow
🌿		⸙	⸙	palm branch (-IE?)
▪		￭	￭	halfwidth black square
◦		￮	￮	halfwidth white circle

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