

Version 06.05.15

Character	Entity	Description	Character	Entity	Description
« —	↞	leftwards two headed arrow	<!--</del-->>	↮	left right arrow with stroke
	↠	rightwards two headed arrow	#	⇍	leftwards double arrow with stroke
$ \leftarrow $	↶	anticlockwise top semicircle arrow	<!---</del-->	↚	leftwards arrow with stroke
\bigcap	↷	clockwise top semicircle arrow	<i>⇒</i> >	⇏	rightwards double arrow with stroke
\downarrow	⇓	downwards double arrow	-/>	↛	rightwards arrow with stroke
↓	↓	downwards arrow	_	↖	north west arrow
$\downarrow\downarrow$	&darr2	downwards paired arrows	G	↺	anticlockwise open circle arrow
1	⇃	downwards harpoon with barb leftwards	\sim	↻	clockwise open circle arrow
ļ	⇂	downwards harpoon	\Rightarrow	⇛	rightwards triple arrow
		with barb rightwards	\Rightarrow	⇒	rightwards double
1	&dlarr	south west arrow			arrow
<u></u>	&drarr	south east arrow	\rightarrow	→	rightwards arrow
\Leftrightarrow	⇔	left right double arrow	ightharpoons	&rarr2	rightwards paired
\longleftrightarrow	↔	left right arrow		01.1	arrows
< ~~ >	↭	left right wave arrow	\hookrightarrow	↪	rightwards arrow with hook
\Leftrightarrow	⇔	left right double arrow	9→	↬	rightwards arrow with
\rightleftharpoons	⇚	leftwards triple arrow		1,	loop
\Leftarrow	⇐	leftwards double arrow	\longrightarrow	↣	rightwards arrow with
\leftarrow	←	leftwards arrow			tail
\rightleftharpoons	&larr2	leftwards paired	\rightarrow	↝	rightwards wave arrow
	01 11	arrows		⇁	rightwards harpoon with barb downwards
\leftarrow	↩	leftwards arrow with hook		⇀	rightwards harpoon
\leftarrow	↫	leftwards arrow with			with barb upwards
		loop	ightleftarrow	&rlarr2	rightwards arrow over leftwards arrow
\leftarrow	↢	leftwards arrow with tail		&rlhar2	rightwards harpoon
	↽	leftwards harpoon with		&IIIIai2,	over leftwards harpoon
•	æmaru,	barb downwards	_	↘	south east arrow
	↼	leftwards harpoon with		↙	south west arrow
		barb upwards	<u> </u>	⇑	upwards double arrow
\leftrightarrows	&lrarr2	leftwards arrow over rightwards arrow	<u> </u>	↑	upwards arrow
	&lrhar2	leftwards harpoon over	<u>†</u>	&uarr2	upwards paired arrows
	ænnarz,	rightwards harpoon	1	↿	upwards harpoon with barb leftwards
\mapsto	↦	rightwards arrow from bar		↾	upwards harpoon with
7	↗	north east arrow			barb rightwards
\iff	⇎	left right double arrow	\$	⇕	up down double arrow
		with stroke	Ţ	↕	up down arrow

Character	Entity	Description	Character	<u>Entity</u>	Description
■ &	█	full block	i	¡	inverted exclamation mark
α ,	&	ampersand	ن	¿	inverted question mark
*	' *	apostrophe asterisk	«	«	left-pointing double angle quotation mark
\	\	reverse solidus	μ	µ	micro sign
\$	\$	dollar sign		·	middle dot
=	=	equals sign	\neg	¬	not sign
>	>	greater-than sign	a	ª	feminine ordinal
{	{	left curly bracket		,	indicator
_	_	low line	o	º	masculine ordinal
((left parenthesis			indicator
[[left square bracket	Ø	ø	latin small letter o with stroke
<	<	less-than sign	•	Q	2.2.2.2
#	#	number sign	¶ 	¶	pilcrow sign
%	%	percent sign	<u>+</u>	±	plus-minus sign
+	+	plus sign	£	£	pound sign
"	"	quotation mark	»	»	right-pointing double angle quotation mark
}	}	right curly bracket	®	®	registered sign
))	right parenthesis	§	§	section sign
]]	right square bracket	-	­	soft hyphen
/	/	solidus	ß	ß	latin small letter sharp
		vertical line	10	CSZIIG,	S
Æ	Æ	latin capital letter ae	þ	þ	latin small letter thorn
Ð	Ð	latin capital letter eth	×	×	multiplication sign
Ø	Ø	latin capital letter o	¥	¥	yen sign
		with stroke	✓	✓	check mark
Þ	Þ	latin capital letter thorn	×	✗	ballot x
æ	æ	latin small letter ae	¥	✠	maltese cross
Å	Å	latin capital letter a	*	✶	six pointed black star
,	0	with ring above	‡	‡	double dagger
¢	¢	cent sign	'' "	″	double prime
©	©	copyright sign		‖	double vertical line
р •	¤	currency sign	1	‵	reversed prime
	°	degree sign	•	•	bullet
÷	÷	division sign	↓	⁁	caret insertion point
ð	ð	latin small letter eth	+	†	•
1/2	½	vulgar fraction one half		†, 	dagger em space
1/4	¼	vulgar fraction one quarter	I		en space
3/4	¾	vulgar fraction three			thin space
, 1	.,	quarters	1		hair space
1/2	½	vulgar fraction one			no-break space
		half	• • •	…	horizontal ellipsis

Character	<u>Entity</u>	<u>Description</u>	Character	<u>Entity</u>	Description
_	―	horizontal bar	Δ	▵	white up-pointing small triangle
-	⁃ ‐	hyphen bullet hyphen	A	▴	black up-pointing
"	"	left double quotation mark	∇	▽	small triangle white down-pointing
**	"	double low-9 quotation mark	Δ	△	triangle white up-pointing triangle
*	∗	low asterisk	Đ	Đ	latin capital letter d
4	'	left single quotation mark		,	with stroke
•	'	single low-9 quotation	ŋ Ħ	Ŋ Ħ	latin capital letter eng latin capital letter h
		mark	11	&HSHOK,	with stroke
	—	em dash	Ł	Ł	latin capital letter l
• • •	…	horizontal ellipsis			with stroke
_	–	en dash	Œ	Œ	latin capital ligature oe
% 0	‰	per mille sign	Ŧ	Ŧ	latin capital letter t with stroke
,	′	prime	đ	0- datualy	latin small letter d with
"	"	right double quotation mark	u	đ	stroke
"	"	right double quotation	ŋ	ŋ	latin small letter eng
,	'	mark right single quotation	ħ	ħ	latin small letter h with stroke
,	'	mark right single quotation	1	ı	latin small letter dotless i
	ærsquor,	mark	К	ĸ	latin small letter kra
<i>'''</i>	‴	triple prime	ł	ĸ, ł	latin small letter I with
	◯	large circle	1	æistiok,	stroke
0	○	white circle	œ	œ	latin small ligature oe
∇	▿	white down-pointing small triangle	ŧ	ŧ	latin small letter t with stroke
▼	▾	black down-pointing small triangle	f	ƒ	latin small letter f with hook
\Diamond	◊	lozenge	J	&jnodot	latin small letter
\triangleleft	◃	white left-pointing			dotless j
		small triangle	\mathcal{H}	ℋ	script capital h
◀	◂	black left-pointing small triangle	×	ℵ	alef symbol
_	▹	white right-pointing	${\mathcal B}$	ℬ	script capital b
	æitii,	small triangle	ב	ℶ	bet symbol
•	▸	black right-pointing	٦	ℸ	dalet symbol
		small triangle	ℓ	ℓ	script small 1
	□	white square	1	ℷ	gimel symbol
	□	white square	${\mathcal H}$	ℋ	script capital h
-	▪	black small square	\mathcal{F}	ℑ	black-letter capital i
	▒	medium shade	$c_{\!\scriptscriptstyle /\!\!\! o}$	℅	care of
	░	light shade	0	ℴ	script small o
	▓	dark shade	\mathcal{M}	ℳ	script capital m

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Character	<u>Entity</u>	<u>Description</u>	Character	Entity	Description
\hbar	ℏ	planck constant over	⋟	⋟	equal to or succeeds
	1	two pi	U	∪	union
\Re	ℜ	black-letter capital r	\preccurlyeq	&cupre	precedes or equal to
₽,	℞	prescription take	Υ	⋎	curly logical or
TM	™	trade mark sign	人	⋏	curly logical and
80	℘	script capital p	\dashv	⊣	left tack
\square	⋒	double intersection	\Diamond	⋄	diamond operator
U	⋓	double union	*	⋇	division times
>>>	⋙	very much greater-than	·	⋱	down right
>>	≫	much greater-than			diagonal ellipsis
**	⋘	very much less-than	≑	≑	geometrically equal to
«	≪	much less-than	<u>o</u>	≖	ring in equal to
€	⋐	double subset	=:	≕	equals colon
∍	⋑	double superset	≒.	≒	approximately equal to
⊩	⊩	forces	Ø	9- amounts v.	or the image of
⊪	⊪	triple vertical bar right	₩ =	∅	empty set
	0 1	turnstile		≡	identical to
^	∧	logical and	≓	≓	image of or approximately equal to
_	∠	angle	≐	≐	approaches the limit
L .	&ang90	right angle	3	∃	there exists
A	∡	measured angle	\forall	∀	for all
≮	∢	spherical angle	ф	⋔	pitchfork
~	≈	almost equal to	≧	≧	greater-than over equal
≊	≊	almost equal or equal to			to
\simeq	≍	equivalent to	<u> </u>	≥	greater-than or equal to
<i>∴</i>	∵	because	\geq	⋛	greater-than equal to or less-than
\perp	⊥	up tack	≷	≷	greater-than or less-
\bowtie	⋈	bowtie		8-,	than
\sim	∽	reversed tilde	≩	≩	greater-than but not
\leq	⋍	reversed tilde equals		0 .	equal to
≎	≎	geometrically equivalent to	<i></i>	⋧	greater-than but not equivalent to
<u>~</u>	≏	difference between	≽	&gsdot	greater-than with dot
\cap	∩	intersection	≳	≳	greater-than or equivalent to
<u>o</u>	≗	ring equal to	∞	∞	infinity
:=	≔	colon equals	ſ	∫	integral
С	∁	complement	<i>J</i> ∈	∈	element of
0	∘	ring operator	≦	≦	less-than over equal to
\cong	≅	approximately equal to	≟ ≪	≤, &ldot	less-than with dot
∮	∮	contour integral		&laot ≤	less-than or equal to
ĬI	∐	n-ary coproduct	<u>≤</u>		•
4	⋞	equal to or precedes	⋝	⋚	less-than equal to or greater-than

Character	<u>Entity</u>	Description	Character	<u>Entity</u>	Description
≶	≶	less-than or greater-	#	∦	not parallel to
_		than	*	⊀	does not precede
≨	≨	less-than but not equal to	⋪	⋫	does not contain as normal subgroup
Ş	⋦	less-than but not equivalent to	⊭	⋭	does not contain as normal subgroup or
≲	≲	less-than or equivalent to			equal
λ	⋋	left semidirect product	\neq	⊁	does not succeed
×	⋉	left normal factor	~	≁	not tilde
	commes,	semidirect product	≄	≄	not asymptotically
⊴	⊴	normal subgroup of or equal to	⊄	⊄	equal to not a subset of
	∣	divides	⊈	⊈	neither a subset of nor
<u>-</u>	−	minus sign	•		equal to
	⊟	squared minus	ot	⊅	not a superset of
+	∓	minus-or-plus sign	⊉	⊉	neither a superset of nor equal to
⊨ →	⊧	models	¥	⊭	not true
<u> </u>	⊸	multimap negated double	⊬	⊬	does not prove
1 17-	⊯ ⊯	vertical bar double right turnstile	*	⊛	circled asterisk operator
l /	⊮	does not force	o	⊚	circled ring operator
∇	∇	nabla	\odot	⊝	circled dash
≉	≉	not almost equal to	\odot	⊙	circled dot operator
≇	≇	neither approximately	\ominus	⊖	circled minus
,		nor actually equal to	\oplus	⊕	circled plus
<i>≠</i>	≠	not equal to	\vee	∨	logical or
≢ ¬1	≢	not identical to	\oslash	⊘	circled division slash
∄ ≺	∄	there does not exist	\otimes	⊗	circled times
≱	≧̸	greater-than over equal to with slash		∥	parallel to
≱	≱	neither greater-than	∂	∂	partial differential
	G ,	nor equal to	\perp	⊥	up tack
*	≯	not greater-than	\blacksquare	⊞	squared plus
∋	∋	contains as member	÷	∔	dot plus
≨	≦̸	less-than over equal to with slash	\prec	≺	precedes
≰	≰	neither less-than nor equal to	⋨	⋨	precedes but not equivalent to
≮	≮	not less-than	Π	∏	n-ary product
$ ot\!$	⋪	not normal subgroup	\propto	∝	proportional to
н	0.1.1	of	$\stackrel{\textstyle \sim}{\sim}$	≾	precedes or equivalent
⊉	⋬	not normal subgroup of or equal to	2/	Prodic.	to
X	∤	does not divide	$\sqrt{}$	√	square root
<i>1</i>	∉	not an element of		⋌	right semidirect product
,-	,				1

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Character	<u>Entity</u>	<u>Description</u>	Character	<u>Entity</u>	Description
\rtimes	⋊	right normal factor	\triangleleft	⊲	normal subgroup of
		semidirect product	\propto	∝	proportional to
⊵	⊵	contains as normal subgroup or equal to	\triangleright	⊳	contains as normal subgroup
Ц	&samalg	n-ary coproduct	⊊	⊊︀	subset of with not
>	≻	succeeds			equal to - variant with stroke through bottom
<u></u>	≽	succeeds or equal to			members
	⋩	succeeds but not equivalent to	⊋	⊋︀	superset of with not equal to - variant with
\succ	≿	succeeds or equivalent to			stroke through bottom members
	⋅	dot operator	\triangle	≙	estimates
•	⊡	squared dot operator	}	≀	wreath product
\	∖	set minus	<	⟨	mathematical left
~	∼	tilde operator	1		angle bracket
\simeq	≃	asymptotically equal to	>	⟩	mathematical right angle bracket
П	⊓	square cap	•	⧫	black lozenge
⊔	⊔	square cup	*	♣	black club suit
	⊏	square image of	♦	♦	black diamond suit
⊑	⊑	square image of or	\$	♀	female sign
		equal to	Ь	♭	music flat sign
	⊐	square original of	•	♥	black heart suit
\supseteq	⊒	square original of or	ð	♂	male sign
\subset	⊂	equal to subset of	4	♮	music natural sign
\subseteq	⊂	subset of or equal to	&	☎	black telephone
⊆ ⊊	-	subset of with not	#	♯	music sharp sign
¥	⊊	equal to	^	♠	black spade suit
\subset	⊂	subset of	$\stackrel{\sim}{\sim}$	☆	white star
\sum	∑	n-ary summation	*	★	black star
\supseteq	⊃	superset of	,	♪	eighth note
⊇	⊇	superset of or equal to		⌆	perspective
= ⊋	⊋	superset of with not	$\overline{\wedge}$	⌅	projective
	1	equal to		⌢	frown
\supset	⊃	superset of		⌈	left ceiling
<i>∴</i> .	∴	therefore	Ĺ	⌊	left floor
Τ	⊤	down tack]	⌉	right ceiling
≜	≜	delta equal to]	⌋	right floorX
Ď	≬	between	\leq	⩽	less-than or slanted equal to
 	⊎	multiset union	< ≈	⪉	less-than and not approx
F	⊨	true	æ ≨	⪇	less-than and single-
-	⊢	right tack	7	, , , , , , , , , , , , , , , , , , ,	line not equal to
<u>V</u>	⊻	xor	≱	⩾̸	greater-than or slanted
:	⋮	vertical ellipsis			equal to with slash

Character	<u>Entity</u>	Description	Character	Entity	<u>Description</u>
≰	⩽̸	less-than or slanted equal to with slash	≽	⪰	succeeds above single- line equals sign
∠	⪯̸	precedes above single- line equals sign with	. ₩	⪺	succeeds above not almost equal to
¥	⪰̸	slash succeeds above single-		⫅	subset of above equals sign
		line equals sign with slash	≨	⫋	subset of above not equal to
⊈	⫅̸	subset of above equals sign with slash	\supseteq	⫆	superset of above equals sign
⊉	⫆̸	superset of above equals sign with slash	⊋	⫌	superset of above not
$\stackrel{\sim}{\sim}$	⪷	precedes above almost equal to	≨	⫋︀	equal to subset of above not
\preceq	⪯	precedes above single- line equals sign			equal to - variant with stroke through bottom members
$\overrightarrow{\ast}$	⪹	precedes above not almost equal to	⊋	⫌︀	superset of above not equal to - variant with
\succsim	⪸	succeeds above almost equal to			stroke through bottom members

BLACKBOARD/DOUBLE-STRUCK/OPEN FACE CHARATERS

Entities for openface characters are the letter followed by "opf".

e.g., The entity for an open face M (M) is 𝕄

ABCDEFGHIJKLMNOPQRSTUVWXYZ

SCRIPT LETTERS

Entities for script letters are the letter followed by "scr".

e.g., The entity for a script H (\mathcal{H}) is ℋ

 $\mathcal{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$

Character	Entity	Description	Character	Entity	Description
			Accents		
,	´	acute accent	•	`	grave accent
Ü	˘	breve	_	¯	macron
~	ˇ	caron		,	
3	¸	cedilla	L	˛	ogonek
^	ˆ	modifier letter circumflex accent	o	˚	ring above
"	˝	double acute accent	~	˜	small tilde
	˙	dot above		¨	diaeresis

ENTITIES FOR ACCENTED LETTERS

Entities for letters that have accents are simply the letter + the accent entity name.

e.g., The entity for letter 'a' with a tilde (ã) is ã or letter 'e' with an acute (é) is é.

IMPORTANT: See the Allen Press Custom Entities for 10 exceptions to using this pattern when creating entities for accented letters.

Allen Press Custom Entities

Character	Entity	Description	Character	Entity	Description
Ĺ	&APLdot	uppercase I with a dot over it	İ	&APldot	lowercase I with a dot over it
Ò	&APOdot	uppercase o with a dot over it	Ò	&APodot	lowercase o with a dot over it
Ś	&APSdot	uppercase s with a dot over it	Ś	&APsdot	lowercase s with a dot over it
Ť	&APTdot	uppercase t with a dot over it	ť	&APtdot	lowercase t with a dot over it
Ŷ	&APXcirc	uppercase x with a circumflex over it	â	&APxcirc	lowercase x with a circumflex over it

Character	Entity	Description	Character	Entity	<u>Description</u>
		Greek I	<u>Letters</u>		
Δ	Δ	greek capital letter	ι	ι	greek small letter iota
Γ	Γ	delta greek capital letter	κ	κ	greek small letter kappa
Λ	Λ	gamma greek capital letter	λ	λ	greek small letter lamda
_		lamda	μ	μ	greek small letter mu
Ω	Ω	greek capital letter omega	ν	ν	greek small letter nu
Φ	Φ	greek capital letter phi	Ω	Ω	greek capital letter omega
Π Ψ	Π Ψ	greek capital letter pi greek capital letter psi	ω	ω	greek small letter omega
Σ	Σ	greek capital letter	ф	φ	greek small letter phi
		sigma	ф	&phis	greek phi symbol
Θ	Θ	greek capital letter theta	φ	ϕ	greek phi symbol
Υ	ϒ	greek upsilon with hook symbol	π	π	greek small letter pi
ī	œopsi,		σ	ϖ	greek pi symbol
Ξ	Ξ	greek capital letter xi	Ψ	ψ	greek small letter psi
α	α	greek small letter alpha	ρ	ρ	greek small letter rho
3	϶	greek reversed lunate	Q	ϱ	greek rho symbol
0		epsilon symbol	σ	σ	greek small letter
β	β	greek small letter beta			sigma
χ	χ	greek small letter chi	ς	ς	greek small letter final sigma
δ	δ	greek small letter delta	τ	τ	greek small letter tau
3	ε	greek small letter epsilon	θ	θ	greek small letter theta
ϵ	ε	greek small letter	θ	&thetas	greek small letter theta
c	ecpsiion,	epsilon	ϑ	&thetas	greek theta symbol
ϵ	&epsis	greek lunate epsilon symbol	υ	υ	greek small letter upsilon
3	ϵ	greek lunate epsilon	ξ	ξ	greek small letter xi
	0 -4	symbol	ζ	ζ	greek small letter zeta
η	η	greek small letter eta	-		-
γ	γ	greek small letter gamma			

ENTITIES FOR ACCENTED GREEK CHARATERS

Entities for Greek characters that have accents are simply the Greek letter entity name + the accent entity name.

e.g., The entity for an alpha acute (á) is &alphaacute; or the entity for a theta circ ($\hat{\theta}$) is &thetacirc;.