

Entities for Symbols and Greek Letters

The following table gives the character entity reference, decimal character reference, and hexadecimal character reference for symbols and Greek letters, as well as the rendering of each in your browser. [Glyphs](#) of the characters are available at the [Unicode Consortium](#).

Browser support for these entities is generally quite poor, but recent browsers support some of the character entity references and decimal character references.

Character	Entity	Decimal	Hex	Rendering in Your Browser		
				Entity	Decimal	Hex
Latin small f with hook = function = florin	ƒ	ƒ	ƒ	f	f	f
Greek capital letter alpha	Α	Α	Α	A	A	A
Greek capital letter beta	Β	Β	Β	B	B	B
Greek capital letter gamma	Γ	Γ	Γ	Γ	Γ	Γ
Greek capital letter delta	Δ	Δ	Δ	Δ	Δ	Δ
Greek capital letter epsilon	Ε	Ε	Ε	E	E	E
Greek capital letter zeta	Ζ	Ζ	Ζ	Z	Z	Z
Greek capital letter eta	Η	Η	Η	H	H	H
Greek capital letter theta	Θ	Θ	Θ	Θ	Θ	Θ
Greek capital letter iota	Ι	Ι	Ι	I	I	I
Greek capital letter kappa	Κ	Κ	Κ	K	K	K
Greek capital letter lambda	Λ	Λ	Λ	Λ	Λ	Λ
Greek capital letter mu	Μ	Μ	Μ	M	M	M
Greek capital letter nu	Ν	Ν	Ν	N	N	N
Greek capital letter xi	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ

Character	Entity	Decimal	Hex	Rendering in Your Browser		
				Entity	Decimal	Hex
Greek capital letter omicron	Ο	Ο	Ο	Ο	Ο	Ο
Greek capital letter pi	Π	Π	Π	Π	Π	Π
Greek capital letter rho	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ
Greek capital letter sigma	Σ	Σ	Σ	Σ	Σ	Σ
Greek capital letter tau	Τ	Τ	Τ	Τ	Τ	Τ
Greek capital letter upsilon	Υ	Υ	Υ	Υ	Υ	Υ
Greek capital letter phi	Φ	Φ	Φ	Φ	Φ	Φ
Greek capital letter chi	Χ	Χ	Χ	Χ	Χ	Χ
Greek capital letter psi	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ
Greek capital letter omega	Ω	Ω	Ω	Ω	Ω	Ω
Greek small letter alpha	α	α	α	α	α	α
Greek small letter beta	β	β	β	β	β	β
Greek small letter gamma	γ	γ	γ	γ	γ	γ
Greek small letter delta	δ	δ	δ	δ	δ	δ
Greek small letter epsilon	ε	ε	ε	ε	ε	ε
Greek small letter zeta	ζ	ζ	ζ	ζ	ζ	ζ
Greek small letter eta	η	η	η	η	η	η
Greek small letter theta	θ	θ	θ	θ	θ	θ
Greek small letter iota	ι	ι	ι	ι	ι	ι
Greek small letter kappa	κ	κ	κ	κ	κ	κ
Greek small letter lambda	λ	λ	λ	λ	λ	λ
Greek small letter mu	μ	μ	μ	μ	μ	μ
Greek small letter nu	ν	ν	ν	ν	ν	ν
Greek small letter xi	ξ	ξ	ξ	ξ	ξ	ξ

Character	Entity	Decimal	Hex	Rendering in Your Browser		
				Entity	Decimal	Hex
Greek small letter omicron	ο	ο	ο	ο	ο	ο
Greek small letter pi	π	π	π	π	π	π
Greek small letter rho	ρ	ρ	ρ	ρ	ρ	ρ
Greek small letter final sigma	ς	ς	ς	ς	ς	ς
Greek small letter sigma	σ	σ	σ	σ	σ	σ
Greek small letter tau	τ	τ	τ	τ	τ	τ
Greek small letter upsilon	υ	υ	υ	υ	υ	υ
Greek small letter phi	φ	φ	φ	φ	φ	φ
Greek small letter chi	χ	χ	χ	χ	χ	χ
Greek small letter psi	ψ	ψ	ψ	ψ	ψ	ψ
Greek small letter omega	ω	ω	ω	ω	ω	ω
Greek small letter theta symbol	ϑ	ϑ	ϑ	ϑ	ϑ	ϑ
Greek upsilon with hook symbol	ϒ	ϒ	ϒ	ϒ	ϒ	ϒ
Greek pi symbol	ϖ	ϖ	ϖ	ϖ	ϖ	ϖ
bullet = black small circle	•	•	•	•	•	•
horizontal ellipsis = three dot leader	…	…	…
prime = minutes = feet	′	′	′	′	′	′
double prime = seconds = inches	″	″	″	″	″	″
overline = spacing overscore	‾	‾	‾	—	—	—
fraction slash	⁄	⁄	⁄	/	/	/
script capital P = power set = Weierstrass p	℘	℘	℘	℘	℘	℘

Character	Entity	Decimal	Hex	Rendering in Your Browser		
				Entity	Decimal	Hex
blackletter capital I = imaginary part	<code>&iimage;</code>	<code>&#8465;</code>	<code>&#x2111;</code>	ℐ	ℐ	ℐ
blackletter capital R = real part symbol	<code>&real;</code>	<code>&#8476;</code>	<code>&#x211C;</code>	℔	℔	℔
trade mark sign	<code>&trade;</code>	<code>&#8482;</code>	<code>&#x2122;</code>	™	™	™
alef symbol = first transfinite cardinal	<code>&alefsym;</code>	<code>&#8501;</code>	<code>&#x2135;</code>	ℵ	ℵ	ℵ
leftwards arrow	<code>&larr;</code>	<code>&#8592;</code>	<code>&#x2190;</code>	←	←	←
upwards arrow	<code>&uarr;</code>	<code>&#8593;</code>	<code>&#x2191;</code>	↑	↑	↑
rightwards arrow	<code>&rarr;</code>	<code>&#8594;</code>	<code>&#x2192;</code>	→	→	→
downwards arrow	<code>&darr;</code>	<code>&#8595;</code>	<code>&#x2193;</code>	↓	↓	↓
left right arrow	<code>&harr;</code>	<code>&#8596;</code>	<code>&#x2194;</code>	↔	↔	↔
downwards arrow with corner leftwards = carriage return	<code>&crarr;</code>	<code>&#8629;</code>	<code>&#x21B5;</code>	↵	↵	↵
leftwards double arrow	<code>&lArr;</code>	<code>&#8656;</code>	<code>&#x21D0;</code>	⇐	⇐	⇐
upwards double arrow	<code>&uArr;</code>	<code>&#8657;</code>	<code>&#x21D1;</code>	⇑	⇑	⇑
rightwards double arrow	<code>&rArr;</code>	<code>&#8658;</code>	<code>&#x21D2;</code>	⇒	⇒	⇒
downwards double arrow	<code>&dArr;</code>	<code>&#8659;</code>	<code>&#x21D3;</code>	⇓	⇓	⇓
left right double arrow	<code>&hArr;</code>	<code>&#8660;</code>	<code>&#x21D4;</code>	⇔	⇔	⇔
for all	<code>&forall;</code>	<code>&#8704;</code>	<code>&#x2200;</code>	∀	∀	∀
partial differential	<code>&part;</code>	<code>&#8706;</code>	<code>&#x2202;</code>	∂	∂	∂
there exists	<code>&exist;</code>	<code>&#8707;</code>	<code>&#x2203;</code>	∃	∃	∃
empty set = null set = diameter	<code>&empty;</code>	<code>&#8709;</code>	<code>&#x2205;</code>	∅	∅	∅
nabla = backward difference	<code>&nabla;</code>	<code>&#8711;</code>	<code>&#x2207;</code>	∇	∇	∇
element of	<code>&isin;</code>	<code>&#8712;</code>	<code>&#x2208;</code>	∈	∈	∈
not an element of	<code>&notin;</code>	<code>&#8713;</code>	<code>&#x2209;</code>	∉	∉	∉
contains as member	<code>&ni;</code>	<code>&#8715;</code>	<code>&#x220B;</code>	∋	∋	∋
n-ary product = product sign	<code>&prod;</code>	<code>&#8719;</code>	<code>&#x220F;</code>	∏	∏	∏

Character	Entity	Decimal	Hex	Rendering in Your Browser		
				Entity	Decimal	Hex
n-ary sumation	∑	∑	∑	Σ	Σ	Σ
minus sign	−	−	−	–	–	–
asterisk operator	∗	∗	∗	*	*	*
square root = radical sign	√	√	√	$\sqrt{\quad}$	$\sqrt{\quad}$	$\sqrt{\quad}$
proportional to	∝	∝	∝	\propto	\propto	\propto
infinity	∞	∞	∞	∞	∞	∞
angle	∠	∠	∠	\angle	\angle	\angle
logical and = wedge	∧	∧	∧	\wedge	\wedge	\wedge
logical or = vee	∨	∨	∨	\vee	\vee	\vee
intersection = cap	∩	∩	∩	\cap	\cap	\cap
union = cup	∪	∪	∪	\cup	\cup	\cup
integral	∫	∫	∫	\int	\int	\int
therefore	∴	∴	∴	\therefore	\therefore	\therefore
tilde operator = varies with = similar to	∼	∼	∼	\sim	\sim	\sim
approximately equal to	≅	≅	≅	\cong	\cong	\cong
almost equal to = asymptotic to	≈	≈	≈	\approx	\approx	\approx
not equal to	≠	≠	≠	\neq	\neq	\neq
identical to	≡	≡	≡	\equiv	\equiv	\equiv
less-than or equal to	≤	≤	≤	\leq	\leq	\leq
greater-than or equal to	≥	≥	≥	\geq	\geq	\geq
subset of	⊂	⊂	⊂	\subset	\subset	\subset
superset of	⊃	⊃	⊃	\supset	\supset	\supset
not a subset of	⊅	⊄	⊄	$\not\subset$	$\not\subset$	$\not\subset$
subset of or equal to	⊆	⊆	⊆	\subseteq	\subseteq	\subseteq
superset of or equal to	⊇	⊇	⊇	\supseteq	\supseteq	\supseteq
circled plus = direct sum	⊕	⊕	⊕	\oplus	\oplus	\oplus
circled times = vector product	⊗	⊗	⊗	\otimes	\otimes	\otimes

Character	Entity	Decimal	Hex	Rendering in Your Browser		
				Entity	Decimal	Hex
up tack = orthogonal to = perpendicular	⊥	⊥	⊥	⊥	⊥	⊥
dot operator	⋅	⋅	⋅	·	·	·
left ceiling = APL upstile	⌈	⌈	⌈	⌈	⌈	⌈
right ceiling	⌉	⌉	⌉	⌋	⌋	⌋
left floor = APL downstile	⌊	⌊	⌊	⌊	⌊	⌊
right floor	⌋	⌋	⌋	⌋	⌋	⌋
left-pointing angle bracket = bra	⟨	〈	〈	⟨	⟨	⟨
right-pointing angle bracket = ket	⟩	〉	〉	⟩	⟩	⟩
lozenge	◊	◊	◊	◇	◇	◇
black spade suit	♠	♠	♠	♠	♠	♠
black club suit = shamrock	♣	♣	♣	♣	♣	♣
black heart suit = valentine	♥	♥	♥	♥	♥	♥
black diamond suit	♦	♦	♦	♦	♦	♦

Maintained by [Liam Quinn](mailto:liam@htmlhelp.com) <liam@htmlhelp.com>

[HTML 4.0 Reference](#) ~ [Latin-1 Characters](#) ~ [Other Special Characters](#)

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