

## \*\* The Extended Ideographic Description Language (IDLx) \*\*

	Unicode Name	A	Name	B	B	Examples
a-1	left to right	☐	left-right	⊕	⊙	潰:⊕彳貫
a-2	above to below	☐	top-down	⊖	⊙	稟:⊖囧木
a-3	surround from bottom left	☐	L-shaped, left first	⊕⊙	⊙	毯:⊙毛炎
a-4	...	...	L-shaped, top first	⊖⊙	⊙	廷:⊙壬廴
a-5	surround from upper left	☐	Γ-shaped	⊕	⊙	慮:⊙虎思
a-6	surround from upper right	☐	package	⊖	⊙	截:⊙戔隹
a-7	/	/	surround from bottom right	⊙	⊙	弋:⊙一弋
a-8	surround from below	☐	plug	⊕	⊙	函:⊕必口
a-9	surround from left	☐	C-shaped	⊖	⊙	玉:⊙王、
a-10	surround from top	☐	surround from top	⊙	⊙	閒:⊙門月
a-11	/	/	reverse C-shaped	⊙	⊙	𠂔:⊙弓工工
a-12	full surround	☐	surround	⊙	⊙	函:⊙白々
a-13	overlaid	☐	crossover	⊙	⊙	夫:⊙二人
a-14	/	/	no operator		●	丿:●
a-15	/	/	geta mark		■	𠂔:●严■
a-16	/	/	rotate 180°	⊙	⊙	去:⊙予
a-17	/	/	horizontal flip	⊕	⊕	五:⊕正
a-18	/	/	similar	⊕	⊕	𠂔:●从⊕电
a-19	/	/	parentheses; group	( )	( )	峯:(⊙山水土)

## \*\* System used in 《汉字信息字典》 \*\*

《汉字信息字典》上海交通大学汉字编码组  
，上海汉语拼音文字研究组编著，樊静责任编  
辑；上海：1988

本书使用的数字，符号一览表

字形结构

符号	表示内容	举例
/	表示上下组合关系	星:日/生
//	表示左右组合关系	把:扌//巴
>, <	表示包容或被包容关系	这:文<讠 (“讠”包容“文”)
	表示嵌套关系	国:口玉
( )	表示层次关系	疑:(匕/矢)/(マ/疋)

Notes:

**a-1, a-2:** The left-right operator ⊕ and the top-down operator ⊖ are the most basic analytical operators of IDLx.

**a-3:** The L-shape, ⊕⊙, is the only binary relationship that occurs in both of its realizations, ⊙ and ⊕; this case is well known to learners of Kanji, as there are many common glyphs with either type of operator.

The choice between ⊙ and ⊕ depends on the element that occupies the left and bottom of the character in question: only 𠂔 and 𠂔 (𠂔, 𠂔) are written *after* the top right and hence need ⊕, as in 這:⊕言𠂔 (observe that using standard Unicode IDL, we are forced to write this as 這:𠂔言, which, crucially, does not preserve the order in which the factors are normally written).<sup>1</sup>

All other elements (i.e. except for 𠂔 and 𠂔) that enclose another one from the left and from below in an L-shape take precedence; hence, in e.g. 𠂔, 走 comes first and 力 comes second, so its formula is 𠂔:⊕走力.

**a-11:** XXXXX XXXXX XXXXX XXXXX XXXXX the reversed C-shape: lowest frequency, missing from Unicode IDCs, erroneously replaced by ⊙ in formula 𠂔:☐☐弓工工 for which we write 𠂔:⊙⊙弓工工.

**a-15:** The symbol ■ originated in Japanese manual typesetting. When a composer couldn't clearly read a character in the manuscript or was unable to find a certain kanji in the type cases, they'd instead pick any sort and put it wrong side first onto the composing stick. When galley proofs were printed, that upside-down sort would leave a mark similar to ■, making it visually clear that something was still missing. In the same way, we use ■ to

stand in for an unresolved element in the formulas. For example, we know the upper left part of 嚴 is 𠂔, a fairly common element, but the lower right part is seemingly not encoded in Unicode, so we write out the formula 嚴: 𠂔 𠂔; this is a syntactically valid way of stating what we can and what we cannot say about that glyph. In other words, 𠂔 represents the unspecified element as much as an  $x$  in a mathematical formula represents the unknown quantity.

**a-13:** The crossover operator 𠂔 is to operators what the geta mark 𠂔 is to elements; it represents an unspecified or underspecified operation. Most of the time, 𠂔 really represents an element being overlaid onto another one, as in 夫: 𠂔 二人, but more generally, it may be used in any

place where no other operator fits, as, for example, in 𠂔 𠂔 𠂔 𠂔 𠂔.

#### Notes

1) — see <https://raw.githubusercontent.com/cjkvi/cjkvi-ids/master/ids.txt> for actual examples

徵: 𠂔 彳 (𠂔 山 一 壬) 攴

毯: 𠂔 毛 炎 as 毯: (𠂔 𠂔 𠂔) 毛 炎

廷: 𠂔 壬 乚 as 廷: (𠂔 𠂔 𠂔) 壬 乚

玉: 𠂔 王 丶 as 玉: (𠂔 𠂔 𠂔) 王 丶

函: 𠂔 𠂔 𠂔 as 函: (𠂔 𠂔 𠂔) 𠂔 𠂔

國: 𠂔 𠂔 或 as 國: (𠂔 𠂔 𠂔) 𠂔 或

	Name	B	Examples	X
a-1	left-right	𠂔	潰: 𠂔 彳 貫	
a-2	top-down	𠂔	稟: 𠂔 𠂔 木	
a-3	L-shaped, left first	𠂔	毯: 𠂔 毛 炎	毯: (𠂔 𠂔 𠂔) 毛 炎
a-4	L-shaped, top first	𠂔	廷: 𠂔 壬 乚	廷: (𠂔 𠂔 𠂔) 壬 乚
a-5	I-shaped	𠂔	慮: 𠂔 𠂔 思	慮: (𠂔 𠂔 𠂔) 𠂔 思
a-6	package	𠂔	截: 𠂔 戔 隹	截: (𠂔 𠂔 𠂔) 戔 隹
a-7	surround from bottom right	𠂔	弋: 𠂔 一 弋	弋: (𠂔 𠂔 𠂔) 一 弋
a-8	plug	𠂔	函: 𠂔 𠂔 𠂔	函: (𠂔 𠂔 𠂔) 𠂔 𠂔
a-9	C-shaped	𠂔	玉: 𠂔 王 丶	玉: (𠂔 𠂔 𠂔) 王 丶
a-10	surround from top	𠂔	閒: 𠂔 門 月	閒: (𠂔 𠂔 𠂔) 門 月
a-11	reverse C-shaped	𠂔	𠂔: 𠂔 弓 工 工	𠂔: (𠂔 𠂔 𠂔) 弓 工 工
a-12	surround	𠂔	𠂔: 𠂔 𠂔 𠂔	𠂔: (𠂔 𠂔 𠂔) 𠂔 𠂔
a-13	crossover	𠂔	夫: 𠂔 二人	
a-14	no operator	𠂔	𠂔: 𠂔	
a-15	geta mark	𠂔	嚴: 𠂔 𠂔 𠂔	
a-16	rotate 180°	𠂔	𠂔: 𠂔 予	
a-17	horizontal flip	𠂔	𠂔: 𠂔 正	
a-18	similar	𠂔	𠂔: 𠂔 从 𠂔 电	
a-19	parentheses; group	( )	𠂔: (𠂔 一 𠂔 一 𠂔 九)	

	Used	G	B	Op	L	T	R	B	l	t	r	b
c-1	Yes	𠂔	𠂔									
c-2	Yes	𠂔	𠂔									
c-15	No	𠂔	𠂔	𠂔	𠂔							
c-16	No	𠂔	𠂔	𠂔		𠂔						

	Used	G		B	Op	L	T	R	B	l	t	r	b
c-7	Yes	𠂔		𠂔	𠂔	𠂔	𠂔			+	+		
c-4	Yes	𠂔	𠂔 𠂔	𠂔	𠂔		𠂔	𠂔		-	+	+	
c-3	Yes	𠂔	𠂔 𠂔	𠂔	𠂔	𠂔			𠂔	+	-	+	+
c-5	Yes	𠂔		𠂔	𠂔	𠂔	𠂔			+	+		+
c-6	Yes	𠂔		𠂔	𠂔		𠂔	𠂔		+	+	+	
c-19	No	𠂔		𠂔	𠂔			𠂔	𠂔	-	-	+	+
c-17	No	𠂔		𠂔	𠂔			𠂔	𠂔	-	-	+	+
c-18	No	𠂔		𠂔	𠂔	𠂔			𠂔	+	-		+

	Used	G	B	Op	L	T	R	B	l	t	r	b
<b>c-12</b>	Yes			U					-	+	+	+
<b>c-8</b>	Yes			∩					+	+	+	
<b>c-9</b>	Yes			U					+	+		+
<b>c-10</b>	Yes			U					+	+	+	
<b>c-25</b>	No			∩					+	+		+
<b>c-20</b>	No			U								
<b>c-22</b>	No			∩								
<b>c-24</b>	No			∩								

	Used	G	B	Op	L	T	R	B	l	t	r	b
<b>c-14</b>	Yes			U								
<b>c-26</b>	No			∩								

	Name	B	E
<b>b-1</b>	left/right		
<b>b-2</b>	top/down		
<b>b-3</b>	surround from bottom left		/
<b>b-4</b>	surround from upper left		
<b>b-5</b>	surround from upper right		
<b>b-6</b>	surround from bottom right		
<b>b-7</b>	surround from below		
<b>b-8</b>	surround from left		
<b>b-9</b>	surround from top		
<b>b-10</b>	surround		
<b>b-11</b>	any operator		
<b>b-12</b>	vertical flip		

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	Unicode Name	A	Name	B	C	E	Examples
1	left to right		left/right				潰:彳貫
2	above to below		top/down				稟:𠂇木
3	surround from bottom left		surround from bottom left				毳:毛炎 廷:壬廴
4	surround from upper left		surround from upper left				慮:虍思
5	surround from upper right		surround from upper right				截:戔隹
6	/	/	surround from bottom right				弋:一弋
7	surround from below		surround from below				囟:兕口
8	surround from left		surround from left				玉:王、
9	surround from top		surround from top				閒:門月
10	/	/	surround from right				
11	full surround		surround				囟:白々
12	overlaid		crossover				夫:二人
13	/	/	any operator				
14	/	/	no operator				丿:
15	/	/	unspecified element				厶:严
16	/	/	rotate 180°				亼:予
17	/	/	horizontal flip				五:正
18	/	/	vertical flip				
19	/	/	similar				龟:从电
20	/	/	parentheses; group	( )			堯:(宀口冫土九)
21	left to middle and right		/	/			衍:(彳彳子)
22	above to middle and below		/	/			衰:(宀艸衣)