

LOWERCASE

straight>straight
(udlijqhmna)R
L(ublijphmnr)

nonnnnnono
nonnunono
nonnbnono
nonninono
nonnjnono
nonnpnono
nonuunono
nonubnono
nonuinono
nonujnono
nonupnono
nonunnono
nonqunono
nonqbnono
nonqinono
nonqjnono
nonqpnono
nonqnnono
nonjunono
nonjbnono
nonjinono
nonjjnono
nonjpnono
nonjnnono
nonnunono
nonnbnono

nonninono
nonnjnono
nonnpnono
nonnnnono
nonaunono
nonabnono
nonainono
nonajnono
nonapnono
nonannono
noniunono
nonibnono
noniinono
nonijnono
nonipnono
noninnono

straight>full round
(udlijqhmna)R L
(ceodqgð)
nonuonono
nonugnono
nonuðnono
nonqonono
nonqgnono
nonqðnono
nonjonono
nonjgnono
nonjðnono
nonionono
nonignono

noniðnono
nonnonono
nonngnono
nonnðnono
nononono

(bpo)R L(ublijphmnr)
nonounono
nonobnono
nonojonon
nonoionon
nonononon

straight>small round
(udlijqhmna)R L(as)
nonuanono
nonusnono
nonqanono
nonqsnono
nonjanono
nonjsnono
nonaanono
nonasnono
nonianono
nonisnono
nonlanono
nonlsnono
nonnanono
nonnsnono

(s)R L(ublijphmnr)
nonsunono

nonsbnono
nonsnonon
nonsjnonon
nonslnonon

straight>void
(udlijqhmna)R
L(vwyzx)

nonavnono
nonaynono
nonaznono
nonaxnono
nonuvnono
nonuynono
nonuznono
nonuxnono
nonqvnono
nonqwnono
nonqynono
nonqznono
nonqxnono
nonjvnono
nonjynono
nonjznono
nonjxnono
nonivnono
noniynono
noniznono
nonixnono
nonvnono

nonynono
nonznono
nonxnono

(kvwyzxr)R
L(ublijphmnr)
nonrunono
nonrlnono
nonrjnono
nonrpnono
nonrbnono

nonknono
nonklnono
nonkjonono
nonkpnono
nonkbnono

nonvunono
nonvlnono
nonvjnono
nonvpnono
nonvbnono

nonzunono
nonzlnono
nonzjnono
nonzpnono
nonzbnono

nonxunono
nonxlnono

nonxjnono
nonxpnono
nonxbnono

straight>open
(udlijgqhmna)R L(afts)
nonufnono
nonuanono
nonutnono
nonusnono
nonqfnono
nonqanono
nonqtnono
nonqsnono
nonjfnono
nonjanono
nonjtnono
nonjsnono
nonnfnon
nonnanon
nonntnon
nonnsnon

(ctfre) R L(ublijphmnr)

noncunono
noncbnono
noncnnono
noncjnonon
nonclonon
noncpnonon
nontunono

nontbnono
nontnonon
nontjnonon
nontlonon
nontpnnonon
nonfunono
nonfbnono
nonfnnonon
nonfjnonon
nonflonon
nonfpnnonon
nonrunono
nonrbnono
nonrnnonon
nonrjnonon
nonrlonon
nonrpnnonon
noneunono
nonebnono
nonenonon
nonejnonon
nonelonon
nonepnnonon

full round >full round
(bpo)R L (ceodqgð)

nonocnono
nonoenono
nonognono
nonoðnono
nonpdonon

nonooonon

full > small
(bpo)R L(as)
nonoanono
nonpaonon
nonosnono
nonpsonon

(as) R L (ceodqgð)

nonaonono
nonaenono
nonagnono
nonadnono
nonaðnono
nonsonono
nonsenono
nonsgnono
nonsdnono
nonsðnono

full > void
(bpog)R L(vwyzx)
nonovnono
nonpvnnon
nonbvnnono
nongvnnono
nonownono
nonpwonon
nonbwnnono
nongwnnono

nonoynono
nonpyonon
nonbynono
nongynono
nonoznono
nonpzonon
nonbznono
nongznono
nonoxnono
nonpxnonon
nonbxnono
nongxnono
nongxnono

(kvwyzx)R L (ceodqgđ)
nonkonono
nonvonono
nonwoonon
nonyoonon
nonkđnono
nonvđnono
nonwđnonon
nonyđnonon
nonzđnonon
nonxđnonon
nonkdnono
nonvdnono
nonwdnonon
nonydonon
nonzdnnonon
nonxdnonon

nonkgnono
nonvgnono
nonwgonon
nonygonon
nonzgnonon
nonxgnonon
nonkenono
nonvenono
nonweonon
nonyeonon
nonzenonon
nonxenonon

full>open
(bpo)R L(fts)

nonofnono
nonpfonon
nonbfnono
nonotnono
nonptnonon
nonbbtnono
nonosnono
nonpsonon
nonbsnono
nonoanono
nonpaonon
nonbanono

(ctfre) R L (ceodqgđ)
noncononon
noncdnonon

noncgnonon
noncđnonon
nontononon
nontdnnonon
nontgnonon
nontđnonon
nonfononon
nonfdnonon
nonfgnonon
nonfđnonon
nonrononon
nonrdnonon
nonrgnonon
nonrđnonon
noneononon
nonednonon
nonegnonon
noneđnonon

small>small
(s)R L(as)
nonsanonon
nonssnonon

small>void
(s)R L(vwyzx)
nonsvnonon
nonswnonon
nonsynonon
nonsznnonon
nonsxnnonon

(kvwyzx)R L(as)
nonkanonon
nonksnonon
nonvanonon
nonvsnonon
nonwanonon
nonwsnonon
nonyanonon
nonysnonon
nonzanonon
nonzsnnonon
nonxanonon
nonxsnonon

small>open
(s)R L(fts)
nonsfnonon
nonstnonon
nonssnonon

(ctfre) R L(as)
noncanonon
noncsnonon
nontanonon
nontsnnonon
nonfanonon
nonfsnonon
nonranonon
nonrsnonon
noneanonon
nonesnonon

void>void
(kvwyzx)R L(vwyzx)
nonkvnnonon
nonkwnnonon
nonkynnonon
nonkznnonon
nonkxnnonon
nonvvnnonon
nonvwnnonon
nonvynnonon
nonvznnonon
nonvxnnonon
nonwvnnonon
nonwwnnonon
nonwynnonon
nonwznnonon
nonwxnnonon
nonyvnnonon
nonywnnonon
nonyynnonon
nonyznnonon
nonyxnnonon
nonzvnnonon
nonzwnnonon
nonzynnonon
nonzznnonon
nonzxnnonon
nonxvnnonon
nonxwnnonon
nonxynnonon
nonxznnonon
nonxxnnonon

void>open
(kvwyzx)R L(fts)
nonkfnnonon
nonktnnonon
nonksnnonon
nonvfnnonon
nonvtnnonon
nonvsnnonon
nonwfnnonon
nonwtnnonon
nonwsnnonon
nonyfnnonon
nonytnnonon
nonymsnonon
nonzfnnonon
nonztnnonon
nonzsnnonon
nonxfnnonon
nonxtnnonon
nonxsnnonon

(ctfre) R L(vwyzx)
noncvnnonon
noncwnnonon
noncynnonon
noncznnonon
noncxnnonon
nontvnnonon
nontwnnonon

nontynnonon
nontznnonon
nontxnnonon
nonfvnnonon
nonfwnnonon
nonfynnonon
nonfznnonon
nonfxnnonon
nonrvnnonon
nonrwnnonon
nonrynnonon
nonrznnonon
nonrxnnonon
nonevnnonon
newnnonon
noneynnonon
noneznnonon
nonexnnonon

open>open
(ctfre) R L(fts)
noncfnnonon
nonctnnonon
noncsnnonon
nontfnnonon
nonttnnonon
nontsnnonon
nonffnnonon
nonftnnonon
nonfsnnonon
nonrfnnonon
nonrtnnonon

nonrsnonon
nonefnnonon
nonetnnonon
nonesnnonon

UPPERCASE

straight>straight
(HMNUIJ)R
L(HMNUIKLPRBEFÐ)
HOHHHHOH
HOHHMHOH
HOHHNHOH
HOHHUHOH
HOHHIHOH
HOHHKHOH
HOHHLHOH
HOHHÐHOH

HOHMHHOH
HOHMMHOH
HOHMNHOH
HOHMUHOH
HOHMIHOH
HOHMKHOH
HOHMLHOH
HOHMÐHOH

HOHNHHOH
HOHNMHOH
HOHNNNHOH

HOHNUHOH		L(HMNUIKLPBEFÐ)	HOHHAHOH
HOHNIHOH	straight>full round	HOHRHHOH	HOHNAHOH
HOHNKHOH	(HMNUIJ)R L (CGOQ)	HOHRNHOH	HOHUAHOH
HOHNLHOH	HOHHOHOH	HOHRUHOH	
HOHNÐHOH	HOHNOHOH	HOHRÐHOH	
	HOHUOHOH	HOHBHHOH	(WVYZXAKR)R
HOHUHHOH	HOHHCHOH	HOHBNHOH	L(HMNUIKLPBEF)
HOHUMHOH	HOHNCHOH	HOHBUHOH	HOHWUHOH
HOHUNHOH	HOHUCHOH	HOHBÐHOH	HOHWHHOH
HOHUUHOH		HOHPHHOH	HOHVUHOH
HOHUIHOH	(DOQÞ)R	HOHPNHOH	HOHVHHOH
HOHUKHOH	L(HMNUIKLPBEFÐ)	HOHPUHOH	HOHYUHOH
HOHULHOH	HOHOUHOH	HOHPÐHOH	HOHYHHOH
HOHUÐHOH	HOHQUHOH		HOHZUHOH
	HOHDUHOH		HOHZHHOH
HOHIHHOH	HOHÞUHOH	straight>void	HOHXUHOH
HOHIMHOH	HOHOHHOH	(HMNUIJ)R L(WVYZXA)	HOHXHHOH
HOHINHOH	HOHQHHOH	HOHHVHOH	HOHAUHOH
HOHIUHOH	HOHDHHOH	HOHNVHOH	HOHAHHOH
HOHIIHOH	HOHÞHHOH	HOHUVHOH	HOHKUHOH
HOHIKHOH	HOHOÐHOH	HOHHWHOH	HOHKHHOH
HOHILHOH	HOHQÐHOH	HOHNWHOH	HOHRUHOH
HOHIÐHOH	HOHDÐHOH	HOHUWHOH	HOHRHHOH
	HOHÞÐHOH	HOHHYHOH	
HOHJHHOH		HOHNYHOH	straight>open
HOHJMHOH	straight>small round	HOHUYHOH	(HMNUIJ)R L(TJS)
HOHJNHOH	(HMNUIJ)R L(S)	HOHHZHOH	OHOHTHOH
HOHJUHOH	OHOHSHOH	HOHNZHOH	OHOHTHOH
HOHJIHOH	OHONSHOH	HOHUZHOH	OHOUTHOH
HOHJKHOH	OHOUSHOH	HOHHXHOH	OHOHJHOH
HOHJLHOH		HOHNXHOH	OHONJHOH
HOHJÐHOH	(RBP)R	HOHUXHOH	OHOUJHOH

OHOHSHOH
OHO~~NS~~SHOH
OHOUSHOH

(CGSEFLTZR
L(HMNUIKLPRBEFÐ)
HOHCUSHOH
HOHCHHOH
HOHCÐHOH
HOH~~GU~~HOH
HOHGHHOH
HOH~~GD~~HOH
HOHSUHOH
HOHSHHOH
HOHSÐHOH
HOHEUHOH
HOHEHHOH
HOHEÐHOH
HOH~~FU~~HOH
HOHFHHOH
HOHFÐHOH
HOHLUHOH
HOHLHHOH
HOHLÐHOH
HOHTUHOH
HOHTHHOH
HOHTÐHOH
HOHZUHOH
HOHZHHOH
HOHZÐHOH

full round >full round
(DOQ~~P~~)R L(CGOQ)
HOH~~PO~~HOH
HOHDOHOH
HOHDCHOH
HOHDQHOH
HOHQOHOH
HOHQCHOH
HOHQQHOH

full > small
(DOQ~~P~~)R L(S)

HOH~~P~~SHOH
HOHDSHOH
HOHOSHOH
HOHQSHOH

(RBP)R L(CGOQ)
HOH~~RO~~HOH
HOHBOHOH
HOH~~PO~~HOH

full > void
(DOQ~~P~~)R L(WVYZXA)

HOHDWHOH
HOH~~PW~~HOH
HOHOWHOH
HOHQWHOH
HOH~~P~~VHOH
HOH~~DV~~HOH

HOHOVHOH
HOHQVHOH
HOHDYHOH
HOH~~P~~YHOH
HOHOYHOH
HOHQYHOH
HOH~~P~~ZHOH
HOHDZHOH
HOHOZHOH
HOHQZHOH
HOH~~PX~~HOH
HOHDXHOH
HOHOXHOH
HOHQXHOH
HOH~~P~~AHOH
HOHDAHOH
HOHOAHOH
HOHQAAHOH

(WVYZXAKR)R L(CGOQ)
HOHWOH
HOH~~VO~~HOH
HOHYOH
HOHZOH
HOH~~XO~~HOH
HOHAAHOH
HOH~~KO~~HOH
HOHROHOH

full>open
(DOQ)R L(TJSZ)

HOH~~DT~~HOH
HOH~~P~~THOH
HOHOTHOH
HOHQTHOH
HOHDJHOH
HOH~~PJ~~HOH
HOHOJHOH
HOH~~QJ~~HOH
HOHDSHOH
HOH~~P~~SHOH
HOH~~OS~~SHOH
HOHQSHOH
HOHDZHOH
HOH~~P~~ZHOH
HOHOZHOH
HOHQZHOH

(CSEFLTZG)R L(CGOQ)
HOH~~CO~~HOH
HOH~~SO~~HOH
HOH~~EO~~HOH
HOH~~FO~~HOH
HOHLOHOH
HOHTHOH
HOHZOH
HOH~~GO~~HOH

small>small
(RBP)R L(S)
HOH~~RS~~HOH
HOHBSHOH

HOHPSHOH

small>void
(RBP)R L(WVYZXA)

HOHRWHOHOH
HOHRVHOHOH
HOHRYHOHOH
HOHRZHOHOH
HOH**RX**HOHOH
HOHRAHOHOH
HOHRAÆHOHOH

HOHBWHOHOH
HOHBVHOHOH
HOHBYHOHOH
HOHBZHOHOH
HOHBXHOHOH
HOHBAHOHOH
HOHBÆHOHOH

HOH**PW**HOHOH
HOHPVHOHOH
HOHPYHOHOH
HOHPZHOHOH
HOH**PX**HOHOH
HOH**PA**HOHOH
HOHPÆHOHOH

(WVYZXAKR)R L(S)

HOHWSHOHOH
HOHVSHOH
HOHYSHOH
HOHZSHOH
HOHXSHOH
HOH**AS**HOHOH
HOHKSHOH
HOHRSHOH

small>open
(RBP)R L(TJSZ)

HOH**RT**HOHOH
HOHRTHOHOH
HOHRTHOHOH
HOHRJHOHOH
HOHRJHOHOH
HOHRJHOHOH
HOHRSHOH
HOHRSHOH
HOHRZHOHOH
HOHRZHOHOH
HOHRZHOHOH

HOH**BT**HOHOH
HOHBTHOH
HOHBTHOH
HOHBJHOHOH

HOHBJHOHOH
HOHBJHOHOH
HOHBSHOHOH
HOHBSHOHOH
HOHBSHOHOH
HOHBZHOHOH
HOHBZHOHOH
HOHBZHOHOH

HOH**PT**HOHOH
HOHPTHOH
HOHPTHOH
HOHPJHOHOH
HOHPJHOHOH
HOHPJHOHOH
HOHPSHOH
HOH**PS**HOHOH
HOHPSHOH
HOHPZHOHOH
HOHPZHOHOH
HOHPZHOHOH

(CGSEFLTZ)R L(TJSZ)

HOH**CS**HOHOH
HOHGSHOH
HOHSSH OH
HOHESH OH
HOHF SHOH
HOHL SHOH
HOHT SHOH
HOH**ZS**HOHOH

HOHCTHOHOH
HOH**GT**HOHOH
HOHSTHOHOH
HOHETHOH
HOHFTHOHOH
HOH**LT**HOHOH
HOH**TT**HOHOH
HOHZTHOH

HOHCJHOHOH
HOH**GJ**HOHOH
HOH**SJ**HOHOH
HOHEJHOHOH
HOH**FJ**HOHOH
HOHLJHOHOH
HOH**TJ**HOHOH
HOH**ZJ**HOHOH

HOHCZHOHOH
HOHGZHOHOH
HOHSZHOHOH
HOH**EZ**HOHOH
HOHFZHOHOH
HOH**LZ**HOHOH
HOHTZHOHOH
HOHZZHOHOH

void>void (WVYZXA KR)R L(WVYZXA)	HOHZXHOH HZXZH HOHZAHOH HZAZH HOHXWHOH HXWXH HOHXVHOH HXVXH HOHXYHOH HXYXH HOHXZHOH HXZXH HOHXXHOH HXXXH HOHXAHOH HXAXH HOHAWHOH HAWAH HOHAVHOH HAVAH HOHAYHOH HAYAH HOHAZHOH HAZAH HOHAXHOH HAXAH HOHAAHOH HAAAH	HOHZTHOH HOHZJHOH HOHZSHOH HOHXTHOH HOHXJHOH HOHXSHOH HOHATHOH HOHAJHOH HOHASHOH HOHKTTHOH HKTXH HOHKJHOH HKJXH HOHKSHOH HKSXH HOHRTTHOH HRTXH HOHRJHOH HRJXH HOHRSHOH HRSXH (CSEFLTZ)R L(WVYZXA) HOHCWHOH HOHCYHOH HOHCVHOH HOHCZHOH HOHCXHOH HOHCAHOH HOHSWHOH HSWSH HOHSYHOH HSYSH	HOHSVHOH HSVSH HOHSZHOH HSZSH HOHSXHOH HSXSH HOHSAHOH HSASH HOHEWHOH HOHEYHOH HOHEVHOH HOHEZHOH HOHEXHOH HOHEAHOH HOHFWHOH HOHFYHOH HOHFBVHOH HOHFZHOH HOHFXHOH HOHFAHOH HOHLWHOH HOHLYHOH HOHLVHOH HOHLZHOH HOHLXHOH HOHLAHOH HOHTWHOH HTWTH HOHTYHOH HTYTH HOHTVHOH HTVTH HOHTZHOH HTZTH HOHTXHOH HTXTH HOHTAHOH HTATH
HOHWWHOH HWWWH HOHWVHOH HWVWH HOHWYHOH HWYWH HOHWZHOH HWZWH HOHWXHOH HWXWH HOHWAHOH HWAWH HOHWÆHOH HWÆWH	HOHYZHOH HYZYH HOHYXHOH HYXYH HOHYAHOH HYAYH		
HOHVWHOH HVWVH HOHVVHOH HVVVH HOHVVHOH HVYVH HOHVZHOH HVZVH HOHVXHOH HVXVH HOHVAHOH HVAVH	HOHWTHOH HOHWJHOH HOHWSHOH HOHVTTHOH HOHVJHOH HOHVSCHOH		
HOHYWHOH HYWYH HOHYVHOH HYVYH HOHYWHOH HYYYH HOHYZHOH HYZYH HOHYXHOH HYXYH HOHYAHOH HYAYH	HOHYTHOH HOHYJHOH HOHYSHOH		
HOHZWHOH HZWZH HOHZVHOH HZVZH HOHZYHOH HZYZH HOHZZHOH HZZZH			

HOHZWHOH HZWZH
HOHZYHOH HZYZH
HOHZVHOH HZVZH
HOHZZHOH HZZZH
HOHZXHOH HZXZH
HOHZAHOH HZAZH

open>open
(CSEFLTZ)R L(TJZ)

HOHCTHOH
HOHCJHOH
HOHCSHOH
HOHCZHOH
HOHSTHOH
HOHSJHOH
HOHSSH OH
HOHSZHOH
HOHETHOH
HOHEJHOH
HOHESH OH
HOHEZHOH
HOHFTHOH
HOHFJHOH
HOHFSHOH
HOHFZHOH
HOHLTHOH
HOHLJHOH
HOHLSHOH
HOHLZHOH

HOHTTHOH
HOHTJHOH
HOHTSHOH
HOHTZHOH
HOHZTHOH
HOHZJHOH
HOHZSHOH
HOHZZHOH

UPPERCASE >
Lowercase

straight>straight

(HMINUJ)R
L(ublijphmnr)

nonHnnono
nonNnnono
nonUnnnono
nonHunono
nonNunono
nonUunono
nonHbnnono
nonNbnnono
nonUbnono
nonHjnnono
nonNjnnono
nonUjnnono
nonHinono
nonNinono
nonUinono

nonHjnnono
nonNjnnono
nonUjnnono
nonHpnnono
nonNpnnono
nonUpnnono
nonHhnnono
nonNhnnono
nonUhnnono

straight>full round
(HMINUJ)R L(ceodqgð)

nonHonono
nonNonono
nonUonono
nonHdnono
nonNdnono
nonUdnono
nonHgnono
nonNgnono
nonUgnono
nonHðnnono
nonNðnnono
nonUðnnono

(DOQ)R L(ublijphmnr)

nonFunono
nonFbnnono
nonFjnnono
nonFnnono

nonFpnnono
nonDunono
nonDbnnono
nonDjnnono
nonDnnono
nonDpnnono
nonOunono
nonObnnono
nonOjnnono
nonOnnnono
nonOpnnono
nonQunono
nonQbnnono
nonQjnnono
nonQnnono
nonQpnnono

straight>small round
(HMNUIJ)R L(as)

nonHanono
nonNanono
nonUanono
nonHsnono
nonNsnono
nonUsnono

(RBPG)R L(ublijphmnr)

nonRunono
nonRbnnono
nonRjnnono

nonRnnono
nonRpnono

nonBunono
nonBbnono
nonBjnono
nonBnnono
nonBpnono

nonPunono
nonPbnono
nonPjnono
nonPnnono
nonPpnono

nonGunono
nonGbnono
nonGjnono
nonGnnono
nonGpnono

straight>void
(HMNUIJ)R L(vwyzx)

nonHvnono
nonNvnono
nonUvnono
nonHwnono
nonNwnono
nonUwnono
nonHynono

nonNynono
nonUynono
nonHznono
nonNznono
nonUznono
nonHxnono
nonNxnono
nonUxnono

(WVYZXAKR)R
L(ublijphmnr)

nonWunono
nonWbnono
nonWjnono
nonWnnono
nonWpnono

nonVunono
nonVbnono
nonVjnono
nonVnnono
nonVpnono

nonYunono
nonYbnono
nonYjnono
nonYnnono
nonYpnono

nonZunono
nonZbnono

nonZjnono
nonZnnono
nonZpnono

nonXunono
nonXbnono
nonXjnono
nonXnnono
nonXpnono

nonAunono
nonAbnono
nonAjnono
nonAnnono
nonApnono

nonKunono
nonKbnono
nonKjnono
nonKnnono
nonKpnono

nonRunono
nonRbnono
nonRjnono
nonRnnono
nonRpnono

straight>open
(HMNUIJ)R L(fts)

nonHfnono

nonNfnono
nonUfnono

nonHtnono
nonNtnono
nonUtnono

nonHsnono
nonNsnono
nonUsnono

(CSEFLTZ)R
L(ublijphmnr)

nonCunono
nonCbnono
nonCjnono
nonCnnono
nonCpnono

nonSunono
nonSbnono
nonSjnono
nonSnnono
nonSpnono

nonEunono
nonEbnono
nonEjnono
nonEnnono
nonEpnono

nonF̄unono
nonF̄b̄nonono
nonF̄jnono
nonF̄nnono
nonF̄pnono

nonLunono
nonL̄b̄nonono
nonL̄jnono
nonL̄nnono
nonL̄pnono

nonTunono
nonT̄b̄nonono
nonT̄jnono
nonT̄nnono
nonT̄pnono

nonZunono
nonZ̄b̄nonono
nonZ̄jnono
nonZ̄nnono
nonZ̄pnono

nonZh̄nonono
nonZh̄nonono
nonZh̄nonono
nonZh̄nonono
nonZh̄nonono

full round >full round
(DOQ)R L (ceodqgđ)

nonD̄onono
nonD̄dnono
nonD̄gnono
nonD̄đnonono
nonF̄onono
nonF̄dnono
nonF̄gnono
nonF̄đnonono
nonOonono
nonOdnono
nonOgnono
nonOđnonono
nonQonono
nonQ̄dnono
nonQ̄gnono
nonQ̄đnonono

full > small
(DOQ)R L(as)

nonD̄anono
nonD̄snono
nonF̄anono
nonF̄snono
nonOanono
nonOsnono
nonQanono
nonQsnono

(RBP)R L (ceodqg)

nonRonono
nonR̄dnono
nonR̄gnono
nonR̄đnonono

nonB̄onono
nonB̄dnono
nonB̄gnono
nonB̄đnonono

nonPonono
nonP̄dnono
nonP̄gnono
nonP̄đnonono

full > void
(DOQ)R L(vwyzx)

nonD̄vnono
nonD̄wnono
nonD̄ynono
nonD̄znono
nonD̄xnono

nonF̄vnono
nonF̄wnono
nonF̄ynono
nonF̄znono
nonF̄xnono

nonŌvnono
nonŌwnono

nonOynono
nonŌznono
nonŌxnono

nonQvnono
nonQwnono
nonQynono
nonQznono
nonQxnono

(WVYZXAKR)R L
(ceodqgđ)

nonW̄onono
nonW̄dnono
nonW̄gnono
nonW̄đnonono

nonV̄onono
nonV̄dnono
nonV̄gnono
nonV̄đnonono

nonYonono
nonȲdnono
nonȲgnono
nonȲđnonono

nonZonono
nonZ̄dnono
nonZ̄gnono
nonZ̄đnonono

nonZonono	nonOfnonono	nonLonono	nonRwnono	nonZanono	
nonZdnono	nonOtnono	nonLdnono	nonRynono	nonZsnono	nonCsnono
nonZgnono	nonOsnono	nonLgnono	nonRznono	nonXanono	nonCanono
nonZðnonono		nonLðnonono	nonRxnono	nonXsnono	nonSsnono
	nonQfnono	nonTonono	nonBvnono	nonAanono	nonSanono
nonXonono	nonQtnono	nonTdnono	nonBwnono	nonĀsnono	nonEsnono
nonXdnonono	nonQsnono	nonTgnono	nonBynono	nonKanono	nonEanono
nonXgnono		nonTðnonono	nonBznono	nonKsnono	nonFsnono
nonXðnonono	(CSEFLTZ)R L		nonBxnono	nonRanono	nonFanono
	(ceodqgð)	nonZonono		nonRsnono	nonLsnono
nonAonono		nonZdnono	nonPvnono	small>open	nonLanono
nonAdnonono	nonConono	nonZgnono	nonPwnono	(RBPG)R L(fts)	nonTsnono
nonĀgnono	nonCdnono	nonZðnonono	nonPynono		nonTanono
nonĀðnonono	nonCgnono		nonPznono	nonRfnono	nonZsnono
	nonCðnonono	small>small	nonPxnonono	nonRtnono	nonZanono
nonKonono		(RBPG)R L(as)		nonRsnono	void>void
nonKdnono	nonSonono		nonGvnono		(WVYZXAKR)R
nonKgnono	nonSdnono	nonRanono	nonGwnono	nonBfnono	L(vwyzx)
nonKðnonono	nonSgnono	nonRsnono	nonGynono	nonBtnono	
	nonSðnonono	nonBanono	nonGznono	nonBsnono	nonWvnono
nonRonono		nonBsnono	nonGxnono		nonWwnono
nonRdnono	nonEonono	nonPanono		nonPfnono	nonWynono
nonRgnono	nonEdnonono	nonPsnono	(WVYZXAKR)R	nonPttnono	nonWznono
nonRðnonono	nonEgnono	nonGanono	L(as)	nonPsnono	nonWxnono
	nonEðnonono	nonGsnono			
full>open			nonWanono	nonGfnono	nonVvnono
(DOQ)R L(fts)	nonFonono	small>void	nonWsnono	nonGtnono	nonVwnono
	nonFdnonono	(RBPG)R	nonVanono	nonGsnono	nonVynono
nonDfnono	nonFgnono	L(vwyzx)	nonVsnono		nonVznono
nonDtnono	nonFðnonono	nonRvnono	nonYanono	(CSEFLTZ)R	nonVxnono
nonDsnono			nonYsnono	L(as)	

nonYvnono
nonYwnono
nonYynono
nonYznono
nonYxnono

nonZvnono
nonZwnono
nonZynono
nonZznono
nonZxnono

nonXvnono
nonXwnono
nonXynono
nonXznono
nonXxnono

nonAvnono
nonAwnono
nonAynono
nonAznono
nonAxnono

nonKvnono
nonKwnono
nonKynono
nonKznono
nonKxnono

nonRvnono
nonRwnono

nonRynono
nonRznono
nonRxnono

void>open
(WVYZXAKR)R L(fts)

nonWfnono
nonWtnono
nonWsnono
nonVfnono
nonVtnono

nonVsnono
nonYfnono
nonYtnono
nonYsnono
nonZfnono
nonZtnono

nonZsnono
nonXfnono
nonXtnono
nonXsnono
nonAfnono
nonAtnono

nonAsnono
nonKfnono
nonKtnono
nonKsnono
nonRfnono
nonRtnono

nonRsnono

(CSEFLTZ)R L(vwyzx)

nonCvnono
nonCwnono
nonCynono
nonCznono
nonCxnono

nonSvnono
nonSwnono
nonSynono
nonSznono
nonSxnono

nonEvnono
nonEwnono
nonEynono
nonEznono
nonExnono

nonFvnono
nonFwnono
nonFynono
nonFznono
nonFxnono

nonLvnono
nonLwnono
nonLynono
nonLznono
nonLxnono

nonTvnono
nonTwnono
nonTynono
nonTznono
nonTxnono

nonZvnono
nonZwnono
nonZynono
nonZznono
nonZxnono

open>open
(CSEFLTZ)R L(fts)

nonCfnono
nonCtnono
nonCsnono
nonSfnono
nonStnono
nonSsnono

nonEfnono
nonEtnono
nonEsnono
nonFfnono
nonFtnono
nonF'snono

nonLfnono
nonLtnono
nonLsnono
nonTfnono
nonTtnono

nonTsnono	nonbÐnono	noniVnono	
nonZfnono	nonðÐnono	nonjVnono	(kvwyzx)R
nonZtnono		nonuVnono	L(HMNUIKLPRBEFÐ)
nonZsnono	straight>small round	nonaVnono	
	(udlijgqhmna)R L(S)		
		nonnYnono	nonkHnono
Lowercase >	nonnSnono	nonqYnono	nonkUnono
UPPERCASE	nonqSnono	noniYnono	nonkÐnono
	noniSnono	nonjYnono	nonvHnono
straight>full round	nonjSnono	nonuYnono	nonvUnono
(udlijgqhmna)R L	nonuSnono	nonaYnono	nonvÐnono
(CGOQ)	nonaSnono		nonwHnono
nonnOnono		nonnZnono	nonwUnono
nonqOnono	(s)R	nonqZnono	nonwÐnono
noniOnono	L(HMNUIKLPRBEF')	noniZnono	nonyHnono
nonjOnono		nonjZnono	nonyUnono
nonuOnono	nonsHnono	nonuZnono	nonyÐnono
nonaOnono	nonsUnono	nonaZnono	nonzHnono
			nonzUnono
(bpo)R	straight>void	nonnXnono	nonzÐnono
L(HMNUIKLPRBEFÐ)	(udlijgqhmna)R	nonqXnono	nonxHnono
	L(WVYZXA)	noniXnono	nonxUnono
nonoHnono		nonjXnono	nonxÐnono
nonpHnono	nonnWnono	nonuXnono	
nonbHnono	nonqWnono	nonaXnono	straight>open
nonðHnono	noniWnono		(udlijgqhmna)R L(TJS)
nonoUnono	nonjWnono	nonnAnono	
nonpUnono	nonuWnono	nonqAnono	nonnTnono
nonbUnono	nonaWnono	noniAnono	nonqTnono
nonðUnono		nonjAnono	noniTnono
nonoÐnono	nonnVnono	nonuAnono	nonjTnono
nonpÐnono	nonqVnono	nonaAnono	nonuTnono
			nonaTnono

nonnJnono
nonqJnono
noniJnono
nonjJnono
nonuJnono
nonaJnono

nonnSnono
nonqSnono
noniSnono
nonjSnono
nonuSnono
nonaSnono

(ctfr) R
L(HMNUIKLPRBEF)

noncHnono
noncUnono
nonfHnono
nonfUnono
nontHnono
nontUnono
nonrHnono
nonrUnono

full round >full round
(bpoe)R L(CGOQ)

nonoOonono
nonpOonono
nonbOonono

full > small
(bpo)R L(S)

nonoSnono
nonpSnono
nonbSnono

(as) R L(CGOQ)

nonaOnono
nonsOnono

full > void
(bpoð)R L(WVYZXA)
(kvwyzx)R L(CGOQ)

nonoWnono
nonpWnono
nonbWnono
nonðWnono
nonoVnono
nonpVnono
nonbVnono
nonðVnono
nonoYnono
nonpYnono
nonbYnono
nonðYnono

nonoZnono
nonpZnono
nonbZnono
nonðZnono
nonoXnono
nonpXnono
nonbXnono
nonðXnono
nonoAnono
nonpAnono
nonbAnono
nonðAnono

full>open
(bpoð)R L(TJS)

nonoTnono
nonpTnono
nonbTnono
nonðTnono

nonoJnono
nonpJnono
nonbJnono
nonðJnono

nonoSnono
nonpSnono
nonbSnono
nonðSnono

(ctfr) R L(CGOQ)

noncOnono
nonfOnono
nontOnono
nonrOnono

small>small
(s)R L(S)

nonsSnono

small>void
(s)R L(WVYZXA)

nonsWnono
nonsVnono
nonsYnono
nonsZnono
nonsXnono
nonsAnono

(kvwyzx)R L(S)

nonkSnono
nonvSnono
nonwSnono
nonySnono
nonzSnono
nonxSnono

small>open
(s)R L(TJS)

nonsTsnono
nonsJnono
nonsSsnono

(ctfr) R L(S)

noncSnono
nontSnono
nonfSnono
nonrSnono

void>void
(kvwyzx)R L(WVYZXA)

nonkWnono
nonvWnono
nonwWnono
nonyWnono
nonzWnono
nonxWnono

nonkVnono
nonvVnono
nonwVnono
nonyVnono
nonzVnono
nonxVnono

nonkYnono
nonvYnono
nonwYnono

nonyYnono
nonzYnono
nonxYnono

nonkZnono
nonvZnono
nonwZnono
nonyZnono
nonzZnono
nonxZnono

nonkXnono
nonvXnono
nonwXnono
nonyXnono
nonzXnono
nonxXnono

nonkAnono
nonvAnono
nonwAnono
nonyAnono
nonzAnono
nonxAnono

void>open
(kvwyzx)R L(TJS)

nonkTnono
nonvTnono
nonwTnono
nonyTnono

nonzTnono
nonxTnono

nonkJnono
nonvJnono
nonwJnono
nonyJnono
nonzJnono
nonxJnono

nonkSnono
nonvSnono
nonwSnono
nonySnono
nonzSnono
nonxSnono

(ctfr) R L(WVYZXA)

noncWnono
nontWnono
nonfWnono
nonrWnono

noncVnono
nontVnono
nonfVnono
nonrVnono

noncYnono
nontYnono
nonfYnono

nonrYnono

noncZnono
nontZnono
nonfZnono
nonrZnono

noncXnono
nontXnono
nonfXnono
nonrXnono

noncAnono
nontAnono
nonfAnono
nonrAnono

open>open
(ctfr) R L(TJS)

noncTnono
nontTnono
nonfTnono
nonrTnono

noncJnono
nontJnono
nonfJnono
nonrJnon

noncSnono

nontSnono	straight>small round	∘∘71∘∘	∘∘∘∘∘∘
nonfSnono	(1) R L(98)	∘∘21∘∘	∘∘∘6∘∘
nonrSnono			∘∘9∘∘∘
	∘∘19∘∘	straight>open	∘∘96∘∘
	∘∘18∘∘	(1) R L(239)	
Figures			full round >small
	111911	111211	round
straight > straight	111811	111311	(∘9) R L(98)
∘∘11∘∘		111911	
111111	(8356) R L (1)		11∘911
HH11HH		∘∘12∘∘	11∘811
nn11nn	∘∘81∘∘	∘∘13∘∘	119911
	∘∘31∘∘	∘∘19∘∘	119811
straight>full round	∘∘51∘∘		
(1) R L (∘6)	∘∘61∘∘	(654)R L(1)	∘∘∘9∘∘
			∘∘∘8∘∘
∘∘1∘∘∘	118111	116111	∘∘99∘∘
∘∘16∘∘	113111	115111	∘∘98∘∘
	115111	114111	
111∘11	116111		L(98) L (∘6)
111611		∘∘61∘∘	
	straight>void	∘∘51∘∘	119∘11
	(1) R L(4)	∘∘41∘∘	119611
(∘9) R L (1)			118∘11
	111411	full round >full round	118611
∘∘91∘∘	∘∘14∘∘	(∘9) R L (∘6)	
∘∘∘1∘∘			∘∘9∘∘∘
	(72)R L (1)	11∘∘11	∘∘96∘∘
119111		11∘611	∘∘8∘∘∘
11∘111	117111	119∘11	∘∘86∘∘
	112111	119611	
			full > void

(09) R L(4)	000300	116811	
	000900		007900
110411	009200	008900	002900
119411	009300	008800	007800
	009900	003900	002800
000400		003800	
009400	(654)R L (06)	005900	small > open
		005800	(8356) R L(239)
	116011	006900	
(72)R L (06)	116611	006800	118211
	115011		118311
117011	115611		118911
117611	114011	small > void	
112011	114611	(8356) R L(4)	113211
112611			113311
	006000	118411	113911
007000	006600	113411	
007600	005000	115411	115211
002000	005600	116411	115311
002600	004000		115911
	004600	008400	
full > open		003400	116211
(09) R L(239)	small > small	005400	116311
	(8356) R L(98)	006400	116911
110211	118911		008200
110311	118811	(72)R L(98)	008300
110911	113911		008900
119211	113811	117911	
119311	115911	112911	003200
119911	115811	117811	003300
	116911	112811	003900

			fh, fk, fl, fb, fi, fj, ff, ft
005200	007400	open > open	
005300	002400	(654)R L(239)	L4 F'7 6T T7
005900			
	void > open	116211	
006200	(72)R L(239)	116311	
006300		116911	
006900		115211	
	117211	115311	
	117311	115911	
	117911	114211	
	112211	114311	
(654)R L(98)	112311	114911	
	112911		
116911			
116811	007200	006200	
115911	007300	006300	
115811	007900	006900	
114911	002200	005200	
114811	002300	005300	
	002900	005900	
006900		004200	
006800		004300	
005900		004900	
005800	(654)R L(4)		
004900			
004800	116411	collisions U>L & L>U	
	115411		
void > void	114411	fT fY	
(72)R L(4)		Qj Qy Qp Qj F'l tA gT gV	
	006400	gX	
117411	005400		
112411	004400	jj, jy, qj, qg, gg, gp, gy,	

