

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
noncnnonon
noncjnonon
nonclnonon
noncpnonon
nontunono

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

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

nonocnono
nonoenono
nonognono
nonoðnono
nonpdnonon

nonoononon

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
nonpvnnonon
nonbvnnono
nongvnnono
nonownnono
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
nonzgnnonon
nonxgnnonon
nonkenono
nonvenono
nonweonon
nonyeonon
nonzenonon
nonxenonon

full>open
(bpo)R L(fts)

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

(ctfre) R L (ceodqgđ)
noncononon
noncdnonon

noncgnnonon
noncđnonon
nontononon
nontdnnonon
nontgnnonon
nontđnonon
nonfononon
nonfdnonon
nonfgnnonon
nonfđnonon
nonrononon
nonrdsnnonon
nonrgnnonon
nonrđnonon
noneononon
nonednonon
nonegnnonon
noneđnonon

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

small>void
(s)R L(vwyzx)
nonsvnonon
nonswnnonon
nonsynnonon
nonsznnonon
nonsxnnonon

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

small>open
(s)R L(fts)
nonsfnnonon
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
nonvxnnnonon
nonwvnnonon
nonwwnnonon
nonwynnonon
nonwznnonon
nonwxnnnonon
nonyvnnonon
nonywnnonon
nonyynnonon
nonyznnonon
nonyxnnonon
nonzvnnonon
nonzwnnonon
nonzynnonon
nonzznnonon
nonzxnnnonon
nonxvnnonon
nonxwnnonon
nonxynnonon
nonxznnnonon
nonxxnnnonon

void>open
(kvwyzx)R L(fts)
nonkfnnonon
nonktnnonon
nonksnnnonon
nonvfnnonon
nonvtnnnonon
nonvsnnnonon
nonwfnnonon
nonwtnnnonon
nonwsnnnonon
nonyfnnonon
nonytnnonon
nonysnnnonon
nonzfnnonon
nonztnnonon
nonzsnnonon
nonxfnnnonon
nonxtnnnonon
nonxsnnnonon

(ctfre) R L(vwyzx)
noncvnnnonon
noncwnnonon
noncynnonon
noncznnnonon
noncxnnnonon
nontvnnnonon
nontwnnonon

nontynnonon
nontznnonon
nontxnnonon
nonfvnnnonon
nonfwnnonon
nonfynnonon
nonfznnnonon
nonfxnnnonon
nonrvnnnonon
nonrwnnonon
nonrynnnonon
nonrznnonon
nonrxnnnonon
nonevnnnonon
newnnnonon
noneynnonon
noneznnnonon
nonexnnnonon

open>open
(ctfre) R L(fts)
noncfnnnonon
nonctnnnonon
noncsnnnonon
nontfnnonon
nonttnnonon
nontsnnonon
nonffnnnonon
nonftnnnonon
nonfsnnnonon
nonrfnnonon
nonrtnnnonon

nonrsnnnonon
nonefnnonon
nonetnnnonon
nonesnnnonon

UPPERCASE

straight>straight
(HMNUIJ)R
L(HMNUIKLPRBEFÐ)
HOHHHHHOH
HOHHMHOOH
HOHHNHOOH
HOHHUHHOH
HOHHIHOOH
HOHHKHOOH
HOHHLHOH
HOHHÐHOH

HOHMHOOH
HOHMMHOH
HOHMNHOOH
HOHMHOOH
HOHMIHOH
HOHMKHOH
HOHMLHOH
HOHMÐHOH

HOHNHHOOH
HOHNMHOOH
HOHNNHOOH

HOHNÜHOH		L(HMNUIKLPŔBEFĐ)	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(HMNUIKLPŔEF)
HOHUMHOH	HOHNCHOH	HOHBUHOH	HOHWUHOH
HOHUNHOH	HOHUCHOH	HOHBÐHOH	HOHWHHOH
HOHUUHOH		HOHPHHOH	HOHVUHOH
HOHUIHOH	(DOQŔ)R	HOHPNHOH	HOHVHHOH
HOHUKHOH	L(HMNUIKLPŔBEFĐ)	HOHPUHOH	HOHYUHOH
HOHULHOH	HOHOUHOH	HOHPÐHOH	HOHYHHOH
HOHUÐHOH	HOHQUHOH		HOHZUHOH
	HOHDUHOH		HOHZHHOH
HOHIHHOH	HOHŔUHOH	straight>void	HOHXUHOH
HOHIMHOH	HOHOHHOH	(HMNUIJ)R L(WVYZXA)	HOHXHHOH
HOHINHOH	HOHQHHOH	HOHHVHOH	HOHAUHOH
HOHIUHOH	HOHDHHOH	HOHNVHOH	HOHAHHOH
HOHIIHOH	HOHŔHHOH	HOHUVHOH	HOHKUHOH
HOHIKHOH	HOHOÐHOH	HOHHWHOH	HOHKHHOH
HOHILHOH	HOHQÐHOH	HOHNWHOH	HOHRUHOH
HOHIÐHOH	HOHDÐHOH	HOHUWHOH	HOHRHHOH
	HOHŔÐHOH	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	(ŔBP)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)
HOHWOHOH
HOH~~VO~~HOH
HOHYOHOH
HOHZOHOH
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
HOHTOHOH
HOHZOHOH
HOH~~GO~~HOH

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

HOHPSHOH

small>void
(RBP)R L(WVYZXA)

HOHRWHOH
HOHRVHOH
HOHRYHOH
HOHRZHOH
HOH**RX**HOH
HOHRAHOH
HOHRÆHOH

HOHBWHOH
HOHBVHOH
HOHBYHOH
HOHBZHOH
HOHBXHOH
HOHBAHOH
HOHBÆHOH

HOH**PW**HOH
HOHPVHOH
HOHPYHOH
HOHPZHOH
HOH**PX**HOH
HOH**PA**HOH
HOHPÆHOH

(WVYZXAKR)R L(S)

HOHWSHOH
HOHVSHOH
HOHYSHOH
HOHZSHOH
HOHXSHOH
HOH**AS**HOH
HOHKSHOH
HOHRSHOH

small>open
(RBP)R L(TJSZ)

HOH**RT**HOH
HOHRTHOH
HOHRTHOH
HOHRJHOH
HOHRJHOH
HOHRJHOH
HOHRSHOH
HOHRSHOH
HOHRZHOH
HOHRZHOH
HOHRZHOH

HOH**BT**HOH
HOHBTHOH
HOHBTHOH
HOHBJHOH

HOHBJHOH
HOHBJHOH
HOHBSHOH
HOHBSHOH
HOHBSHOH
HOHBZHOH
HOHBZHOH
HOHBZHOH

HOH**PT**HOH
HOHPTHOH
HOHPTHOH
HOHPJHOH
HOHPJHOH
HOHPJHOH
HOHPSHOH
HOH**PS**HOH
HOHPSHOH
HOHPZHOH
HOHPZHOH
HOHPZHOH

(CGSEFLTZ)R L(TJSZ)

HOH**CS**HOH
HOHGSHOH
HOHSSHOH
HOHESHOH
HOHFSHOH
HOHLSHOH
HOHTSHOH
HOH**ZS**HOH

HOHCTHOH
HOH**GT**HOH
HOHSTHOH
HOHETHOH
HOHFTHOH
HOH**LT**HOH
HOH**TT**HOH
HOHZTHOH

HOHCJHOH
HOH**GJ**HOH
HOH**SJ**HOH
HOHEJHOH
HOH**FJ**HOH
HOHLJHOH
HOH**TJ**HOH
HOH**ZJ**HOH

HOHCZHOH
HOHGZHOH
HOHSZHOH
HOH**EZ**HOH
HOHFZHOH
HOH**LZ**HOH
HOHTZHOH
HOHZZHOH

void>void
(WVYZXA KR)R
L(WVYZXA)

HOHWWHOH HWWWH
HOHWVHOH HWVWH
HOHWYHOH HWYWH
HOHWZHOH HWZWH
HOHWXHOH HWXWH
HOHWAHOH **HWAWH**
HOHWÆHOH HWÆWH

HOHVWHOH HVWVH
HOHVVHOH HVVVH
HOHVVHOH HVVVH
HOHVZHOH HVZVH
HOHVXHOH HVXVH
HOHVAHOH HVAVH

HOHYWHOH HYWYH
HOHYVHOH HYVYH
HOHYWHO HYYYH
HOHYZHOH **HYZYH**
HOHYXHOH HYXYH
HOHYAHOH **HYAYH**

HOHZWHOH HZWZH
HOHZVHOH HZVZH
HOHZYHOH **HZYZH**
HOHZZHOH HZZZH

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

void>open
(WVYZXAKR)R L(TJS)

HOHWTHOH
HOH**WJ**HOH
HOH**WS**HOH

HOH**VT**HOH
HOH**VJ**HOH
HOHVSHOH

HOHYTHOH
HOH**YJ**HOH
HOHYSHOH

HOHZTHOH
HOHZJHOH
HOH**ZS**HOH

HOHXTHOH
HOHXJHOH
HOHXSHOH

HOHATHOH
HOHAJHOH
HOHASHOH

HOH**KT**HOH HKTXH
HOHKJHOH HKJXH
HOHKSHOH HKSXH

HOH**RT**HOH HRTXH
HOHRJHOH HRJXH
HOHRSHOH HRSXH

(CSEFLTZ)R
L(WVYZXA)

HOHCWHOH
HOHCYHOH
HOHCVHOH
HOH**CZ**HOH
HOH**CX**HOH
HOH**CA**HOH

HOHSWHOH HSWSH
HOHSYHOH HSYSH

HOHSVHOH HSVSH
HOHSZHOH HSZSH
HOHSXHOH HSXSH
HOHSAHOH HSASH

HOHEWHO H
HOHEYHOH
HOHEVHOH
HOH**EZ**HOH
HOH**EX**HOH
HOH**EA**HOH

HOH**FW**HOH
HOHFWHOH
HOHFVHOH
HOHFZHOH
HOH**FX**HOH
HOHFAHOH

HOHLWHO H
HOHLYHOH
HOHLVHOH
HOHLZHOH
HOHLXHOH
HOHLAHOH

HOHTWHO H
HOHTYHOH HTYTH
HOHTVHOH HTVTH
HOHTZHOH HT**Z**TH
HOHTXHOH HTXTH
HOHTAHOH HTATH

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	nonNynono	nonZjnono	nonNfnono
nonRpnono	nonUynono	nonZnnono	nonUfnono
	nonHznono	nonZpnono	
nonBunono	nonNznono		nonHtnono
nonBbnono	nonUznono	nonXunono	nonNtnono
nonBjnono	nonHxnono	nonXbnono	nonUtnono
nonBnnono	nonNxnono	nonXjnono	
nonBpnono	nonUxnono	nonXnnono	nonHsnono
		nonXpnono	nonNsnono
nonPunono	(WVYZXAKR)R		nonUsnono
nonPbnono	L(ublijphmnr)	nonAunono	
nonPjnono		nonAbnono	(CSEFLTZ)R
nonPnnono	nonWunono	nonAjnono	L(ublijphmnr)
nonPpnono	nonWbnono	nonAnnono	
	nonWjnono	nonAprono	nonCunono
nonGunono	nonWnnono		nonCbnono
nonGbnono	nonWpnono	nonKunono	nonCjnono
nonGjnono		nonKbnono	nonCnnono
nonGnnono	nonVunono	nonKjnono	nonCpnono
nonGpnono	nonVbnono	nonKnnono	
	nonVjnono	nonKpnono	nonSunono
	nonVnnono		nonSbnono
straight>void	nonVpnono	nonRunono	nonSjnono
(HMNUIJ)R L(vwyzx)		nonRbnono	nonSnnono
	nonYunono	nonRjnono	nonSpnono
nonHvnono	nonYbnono	nonRnnono	
nonNvnono	nonYjnono	nonRpnono	nonEunono
nonUvnono	nonYnnono		nonEbnono
nonHwnono	nonYpnono	straight>open	nonEjnono
nonNwnono		(HMNUIJ)R L(fts)	nonEnnono
nonUwnono	nonZunono		nonEpnono
nonHynono	nonZbnono	nonHfnono	

nonFunono		nonRonono	nonOynono
nonFbnono	nonDonono	nonRdnono	nonOznono
nonFjnono	nonDdnono	nonRgnono	nonOxnono
nonFnnono	nonDgnono	nonRðnono	
nonFpnono	nonDðnono		nonQvnono
	nonFonono	nonBonono	nonQwnono
nonLunono	nonFdnono	nonBdnono	nonQynono
nonLbnono	nonFgnono	nonBgnono	nonQznono
nonLjnono	nonFðnono	nonBðnono	nonQxnono
nonLnnono	nonOonono		
nonLpnono	nonOdnono	nonPonono	(WVYZXAKR)R L
	nonOgnono	nonPdnono	(ceodqgð)
nonTunono	nonOðnono	nonPgnono	
nonTbnono	nonQonono	nonPðnono	nonWonono
nonTjnono	nonQdnono		nonWdnono
nonTnnono	nonQgnono	full > void	nonWgnono
nonTpnono	nonQðnono	(DOQ)R L(vwyzx)	nonWðnono
nonZunono	full > small	nonDvnono	nonVonono
nonZbnono	(DOQ)R L(as)	nonDwnono	nonVdnono
nonZjnono		nonDynono	nonVgnono
nonZnnono	nonDanono	nonDznono	nonVðnono
nonZpnono	nonDsnono	nonDxnono	
	nonFanono		nonYonono
nonZhnono	nonFsnono	nonFvnono	nonYdnono
nonZhnono	nonOanono	nonFwnono	nonYgnono
nonZhnono	nonOsnono	nonFynono	nonYðnono
nonZhnono	nonQanono	nonFznono	
nonZhnono	nonQsnono	nonFxnono	nonZonono
			nonZdnono
full round >full round	(RBP)R L (ceodqg)	nonOvnono	nonZgnono
(DOQ)R L (ceodqgð)		nonOwnono	nonZðnono

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	nonAsnonono	nonEsnono
nonXdnonono	nonQsnono	nonTgnono	nonBynono	nonKanono	nonEanono
nonXgnono		nonTðnonono	nonBznono	nonKsnono	nonFsnono
nonXðnonono	(CSEFLTZ)R L		nonBxnono	nonRanono	nonFanono
	(ceodqğð)	nonZonono		nonRsnono	nonLsnono
nonAonono		nonZdnono	nonPvnono	small>open	nonLanono
nonAdnonono	nonConono	nonZgnono	nonPwnono	(RBPG)R L(fts)	nonTsnono
nonAgnono	nonCdnono	nonZðnonono	nonPynono		nonTanono
nonAðnonono	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	nonPtnono	nonWznono
nonRðnonono	nonEgnono	nonGanono	L(as)	nonPsnono	nonWxnono
	nonEðnonono	nonGsnono			
full>open			nonWanono	nonGfnono	nonVvnono
(DOQ)R L(fts)	nonFonono		nonWsnono	nonGtnono	nonVwnono
	nonFdnonono	small>void	nonVanono	nonGsnono	nonVynono
nonDfnono	nonFgnono	(RBPG)R	nonVsnono		nonVznono
nonDtnono	nonFðnonono	L(vwyzx)	nonYanono	(CSEFLTZ)R	nonVxnono
nonDsnono		nonRvnono	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

nonF'tnono
nonF'snono
nonLfnono
nonLtnono
nonLsnono

nonTfnono
nonTtnono

nonTsnono	nonbÐnono	noniVnono	
nonZfnono	nonðÐnono	nonjVnono	(kvwyzx)R
nonZtnono		nonuVnono	L(HMNUIKLPRBEFÐ)
nonZsnono	straight>small round (udlijgqhmna)R L(S)	nonaVnono	
		nonnYnono	nonkHnono
Lowercase > UPPERCASE	nonnSnono	nonqYnono	nonkUnono
	nonqSnono	noniYnono	nonkÐnono
	noniSnono	nonjYnono	nonvHnono
straight>full round (udlijgqhmna)R L (CGOQ)	nonjSnono	nonuYnono	nonvUnono
	nonuSnono	nonaYnono	nonvÐnono
	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
			nonzÐnono
(bpo)R	straight>void	nonnXnono	nonxHnono
L(HMNUIKLPRBEFÐ)	(udlijgqhmna)R L(WVYZXA)	nonqXnono	nonxUnono
		noniXnono	nonxÐnono
nonoHnono		nonjXnono	
nonpHnono	nonnWnono	nonuXnono	straight>open (udlijgqhmna)R L(TJS)
nonbHnono	nonqWnono	nonaXnono	
nonðHnono	noniWnono		
nonoUnono	nonjWnono	nonnAnono	nonnTnono
nonpUnono	nonuWnono	nonqAnono	nonqTnono
nonbUnono	nonaWnono	noniAnono	noniTnono
nonðUnono		nonjAnono	nonjTnono
nonoÐnono	nonnVnono	nonuAnono	nonuTnono
nonpÐnono	nonqVnono	nonaAnono	nonaTnono

nonnJnono	nonoOonono	nonoZnono	noncOonono
nonqJnono	nonpOonono	nonpZnono	nonfOonono
noniJnono	nonbOonono	nonbZnono	nontOonono
nonjJnono	full > small	nonðZnono	nonrOonono
nonuJnono	(bpo)R L(S)	nonoXnono	
nonaJnono		nonpXnono	small>small
		nonbXnono	(s)R L(S)
nonnSnono	nonoSnono	nonðXnono	
nonqSnono	nonpSnono	nonoAnono	nonsSnono
noniSnono	nonbSnono	nonpAnono	
nonjSnono	(as) R L(CGOQ)	nonbAnono	small>void
nonuSnono		nonðAnono	(s)R L(WVYZXA)
nonaSnono	nonaOonono	full>open	
	nonsOonono	(bpoð)R L(TJS)	nonsWnono
(ctfr) R			nonsVnono
L(HMNUIKLPRBEF)	full > void	nonoTnono	nonsYnono
	(bpoð)R L(WVYZXA)	nonpTnono	nonsZnono
noncHnono	(kvwyzx)R L(CGOQ)	nonbTnono	nonsXnono
noncUnono		nonðTnono	nonsAnono
nonfHnono	nonoWnono		
nonfUnono	nonpWnono	nonoJnono	(kvwyzx)R L(S)
nontHnono	nonbWnono	nonpJnono	
nontUnono	nonðWnono	nonbJnono	nonkSnono
nonrHnono	nonoVnono	nonðJnono	nonvSnono
nonrUnono	nonpVnono		nonwSnono
	nonbVnono	nonoSnono	nonySnono
	nonðVnono	nonpSnono	nonzSnono
	nonoYnono	nonbSnono	nonxSnono
full round >full round	nonpYnono	nonðSnono	
(bpoe)R L(CGOQ)	nonbYnono		small>open
	nonðYnono	(ctfr) R L(CGOQ)	(s)R L(TJS)

nonsTsnono	nonyYnono	nonzTnono	nonrYnono
nonsJnono	nonzYnono	nonxTnono	
nonsSsnono	nonxYnono		noncZnono
		nonkJnono	nontZnono
(ctfr) R L(S)	nonkZnono	nonvJnono	nonfZnono
	nonvZnono	nonwJnono	nonrZnono
noncSnono	nonwZnono	nonyJnono	
nontSnono	nonyZnono	nonzJnono	noncXnono
nonfSnono	nonzZnono	nonxJnono	nontXnono
nonrSnono	nonxZnono		nonfXnono
		nonkSnono	nonrXnono
void>void	nonkXnono	nonvSnono	
(kvwyzx)R L(WVYZXA)	nonvXnono	nonwSnono	noncAnono
	nonwXnono	nonySnono	nontAnono
nonkWnono	nonyXnono	nonzSnono	nonfAnono
nonvWnono	nonzXnono	nonxSnono	nonrAnono
nonwWnono	nonxXnono		
nonyWnono		(ctfr) R L(WVYZXA)	
nonzWnono	nonkAnono	noncWnono	open>open
nonxWnono	nonvAnono	nontWnono	(ctfr) R L(TJS)
	nonwAnono	nonfWnono	
nonkVnono	nonyAnono	nonrWnono	noncTnono
nonvVnono	nonzAnono		nontTnono
nonwVnono	nonxAnono	noncVnono	nonfTnono
nonyVnono		nontVnono	nonrTnono
nonzVnono	void>open	nonfVnono	
nonxVnono	(kvwyzx)R L(TJS)	nonrVnono	noncJnono
			nontJnono
nonkYnono	nonkTnono	noncYnono	nonfJnono
nonvYnono	nonvTnono	nontYnono	nonrJnon
nonwYnono	nonwTnono	nonfYnono	
	nonyTnono		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,	

