



മലയാളം അക്ഷരത്തോപം

സ്വത്രു മലയാളം കമ്പ്യൂട്ടിങ് - കേരള ഭാഷാ ഇൻസിറ്റുട്ട്

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അരുമാവം

കേരള ഭാഷാ ഇൻസ്റ്റിറ്റുട്ടിന്റെ സാമ്പത്തികസഹായത്രോടെ സ്വത്രു മലയാളം കമ്പ്യൂട്ടിങ്ങ് ഫ്രീപ്പക്കല്ലുന്ന ചെയ്തു പുറത്തിരക്കിയ മലയാളം യൂണിക്കോഡ് അക്ഷരരൂപമാണ് ഗായത്രി. അക്ഷരങ്ങളുടെ ഫ്രീപ്പക്കല്ലുന്ന നിർവ്വഹിച്ചത് ശ്രീ. ബിനോയ് ദേബാമുനിക്ക് ആണ്. ഓഫീസ് ടൈപ്പിംഗ് സാങ്കേതികതയിൽ കാവു മനോഹരി ഫ്രീപ്പക്കല്ലുന്ന ഫ്രോജക്ട് മേൽനോട്ടം സന്നോഷ്ട് തോട്ടിങ്ങൽ നിർവ്വഹിച്ചു.

രിഗ്രലർ, ബോർഡ്, തിന്റെ എന്നിങ്ങനെ മുന്നു കനങ്ങളിലൂളു ഹോണ്ടുകളായി ലഭ്യമായ ഗായത്രി, തലക്കെട്ടുകൾക്ക് അനയോജ്യമായ വിധമാണ് ഫ്രീപ്പക്കല്ലുന്ന ചെയ്തിരിക്കുന്നത്. എക്കിലും ചെറിയ വലിപ്പത്തിലും സാമാന്യം നല്ല വായനാക്ഷമത ഗായത്രിയ്ക്കും. ഈ റിപ്പോർട്ട് പൂർണ്ണമായും ഗായത്രി ഉപയോഗിച്ചാണ് തയ്യാറാക്കിയിരിക്കുന്നത്.

മെച്ചപ്പെട്ട മലയാളം ഹോണ്ടുകളുടെ ലഭ്യത മലയാളത്തിൽ കാരിവാണ്. സ്വത്രു മലയാളം കമ്പ്യൂട്ടിങ്ങിന്റെ സാങ്കേതികമികവിൽ പുറത്തിരക്കിയ മലയാളം ഹോണ്ടുകളുടെ കൂടെ ഗായത്രി എന്ന ഈ അക്ഷരരൂപം കൂടി സമർപ്പിക്കുന്നു.

അക്ഷരസത്യം

യുണിക്കോഡിന്റെ പതിനൊന്നാം പതിപ്പിനെ ആധാരമാക്കിയാണ് ഗായത്രി നിർമ്മിച്ചിട്ടുള്ളത്. മലയാളത്തിൽ ഈന്ന് നിത്യോപയോഗത്തിലുള്ള സ്വരങ്ങളും വ്യഞ്ജനങ്ങളും ചില്ലക്ഷരങ്ങളും അക്കങ്ങളിൽ തുടരെ പ്രാചീനമലയാളത്തിൽ നിലനിന്നിതന അക്ഷരങ്ങളും അക്കങ്ങളുമെല്ലാം ചേർന്ന സമഗ്രമായ അക്ഷരസംശയം ഗായത്രിയിലുണ്ട്. മലയാളത്തിലെ പുരാവേക്ഷണ ഡിജിറ്റേസ് ചെയ്യേണ്ടാർ അത്യുന്നതാപേക്ഷിതമാണീവ. കാൽ, അര, മുകാൽ, പതിനാറിൽമുന്ന് തുടങ്ങിയ ഭിന്നസംഖ്യാത്താപങ്ങൾ കുറിക്കുന്ന ര, സി, സി, പ്രശ്ന ചിഹ്നങ്ങളോക്കെ ഗായത്രിയിലുണ്ട്. മലയാളം യുണിക്കോഡ് പട്ടിക സമ്പൂർണ്ണമായി ഗായത്രിയിൽ തയ്യാറാക്കിയിരിക്കുന്നത് ചിത്രം 1 തോണിയാണ്.

മലയാളത്തിലെ തുടക്ഷരങ്ങളെ പരമാവധി ഉൾക്കൊള്ളിച്ചുകൊണ്ടാണ് ഗായത്രിയുടെ രൂപകല്പന. അതുകൊണ്ട് തന്നെ ഇതിനെ ഒരു സമഗ്രലിപി ഫോണ്ടുമാണ് വിളിക്കാം.

ഈന്ന് മലയാളരേവകളിൽ മലയാളത്തോടൊപ്പം ഇംഗ്ലീഷ് വാക്കുകളും കലർത്തിയെഴുതുന്നത് സർവ്വസാധാരണമാണ്. അതുകൊണ്ട് തന്നെ ആധുനികമലയാളം ഫോൺകളിൽ മലയാളം ലിപിയുടെ ശൈലിയ്ക്ക് അനുസരിച്ചായ ഇംഗ്ലീഷ്യർഷൈറ്റുന്ന ലാറ്റിൻ അക്ഷരങ്ങളും അത്യാവശ്യമാണ്. ഗായത്രിയിൽ ലാറ്റിൻ അക്ഷരങ്ങളും തുടർന്നു അതുകൊണ്ട് തന്നെ ഉൾപ്പെടുത്തിയിട്ടുണ്ട്. എല്ലാം ചേർന്ന് ആകെ ആയിരത്തി ഒന്നനുറിൽപ്പരം അക്ഷരങ്ങൾ ഗായത്രിയിലുണ്ട്.

മലയാളത്തിലെ ചില അക്ഷരങ്ങൾക്ക് സാർവ്വത്രികമായി ഒരേ രൂപമല്ല ഉള്ളത്. 'ച', 'കു', 'ഉള' തങ്ങിയവയുടെ ശൈലിയേറേങ്ങളും കൊണ്ടുകൊണ്ട് അവ തുടർന്നു ചേർത്തിട്ടുണ്ട്. സോഫ്റ്റ്‌വെയർ സഹായത്തോടെ ഇതിലേരുവേണമെന്ന തെരഞ്ഞെടുക്കാൻ ഉപയോകതാവിനാക്കാം.

ചീതും 1: മലയാളം യൂണിക്കോഡ് സമ്പർക്ക കവറേജ്

അപകളം

ആമവത്തിൽ സുചിപ്പിച്ചത് പോലെ തലക്കെട്ടുകൾക്ക് അന്നയോജ്യമായ വിധമാണ് ഗായത്രിയുടെ അപകളം. അക്ഷരങ്ങളിലെ വരകൾക്ക് ഒരേ വീതിയല്ല. അക്ഷരങ്ങളുടെ അറ്റങ്ങൾ എതാണ്ട് ഉചിംഭിട്ടാണ്. കൂർത്ത അറ്റങ്ങൾ ഇല്ലാത്തതുകൊണ്ട് വായന ആയാസരഹിതമായി നടക്കകയും ചെയ്യും. വലിയ അപത്തിൽ ഇവ വ്യക്തമായി കാണാവുന്ന മിഴിവാർന്ന ഡിസൈൻ സാമ്പത്തകൾ ഗായത്രിയ്ക്ക് നൽകാനാക്കും. ചീറ്റും [2](#) നോക്കുക.

പുസ്തകങ്ങളുടേയും ആനകാലികങ്ങളുടേയുമെല്ലാം പ്രയൗട്ട് തയ്യാറാക്കുന്നോൾ പല കനത്തിലുള്ള ഫോൺകൾ വേരിയർട്ടുകൾ ആവശ്യമായി വരാറുണ്ട്. ഇതിനായി മുന്നക്കന്നങ്ങളിൽ - ഫോർമ്മേഡിയ്, റെഗ്രിലർ, തിന്റെ - ഗായത്രി അക്ഷരങ്ങളും ലഭ്യമാണ്.



A gentle and modern Malayalam display typeface. Available in three weights, Gayathri is best suited for headlines, posters, titles and captions. Unicode compliant and libre licensed.

ഗായത്രി
A Book Typeface

ചീത്രം 2: ഡിസൈൻ വിശദാംശങ്ങൾ. അക്ഷരങ്ങളുടെ അറുങ്ങൾ ഉത്തരവും വായനാസ്വഭാവം നൽകാനുമാണ്.

നിർമ്മാണവും ലൈസൻസിങ്ങും

ഗായത്രി ഫോണ്ട് നിർമ്മാണം പുർണ്ണമായും സ്വതന്ത്രസോഫ്റ്റ്‌വെയർ ഉപയോഗിച്ചാണ് നിർമ്മിച്ചിരിക്കുന്നത്. ഡിസൈനർ അക്ഷരങ്ങളുടെ ബോർഡ്, റെഗ്രാഫ്, തിന്റെ ശൈലികളിലുള്ള വെക്ടർ ഇമേജുകൾ തയ്യാറാക്കി. ഫോണ്ടിന്റെ മുലയുപം UFO (Unified Font Object) ഫോർമാറ്റിലാണ്. അക്ഷരങ്ങളുടെ വെക്ടർ ചിത്രങ്ങളെ UFO മാതൃകയിലുള്ള ഫീഡ് ഫയലുകൾ ആക്കകയാണ് ഫോണ്ട് എന്നിനിയറിങ്ങിലെ ആദ്യ പട്ടിയായി ചെയ്യുന്നത്. പിന്നീട് കൂടുതലാക്ഷരങ്ങൾ കൂടുതുമായി ചീതികൾ കാനാവശ്യമായ ഓഫീസ് ഫോണ്ടുകളിൽ OTF, TTF, WOFF ഫോർമാറ്റിലുള്ള ഫോണ്ടുകൾ നിർമ്മിച്ചു. ഈ ഫോർമാറ്റുകളിലെല്ലാമുള്ള ഗായത്രിയുടെ ബോർഡ്, റെഗ്രാഫ്, തിന്റെ ഫോണ്ടുകൾ സ്വതന്ത്ര മലയാളം കമ്പ്യൂട്ടറിങ്ങിന്റെ (<https://smc.org.in/fonts/>) വെബ്സൈറ്റിൽ നിന്നും ഡാઉൺലോഡ് ചെയ്യാൻ ലഭ്യമാണ്.

ഫോണ്ടിന്റെ സോഴ്സ് കോഡ് സ്വതന്ത്രമാണ്. അതായത്, വരച്ച അക്ഷരത്രയുപങ്ങളുടെ വെക്ടർ ഇമേജുകൾ (svg format), ഇവയിൽ നിന്നും തയ്യാറാക്കിയ ഫീഡ് ഫയലുകൾ, ഓഫീസ് ഫോണ്ടുകൾ നിയമങ്ങൾ ഇവയെല്ലാം നിർമ്മാണാലട്ടത്തിൽ ഇതുവരെ വരുത്തിയ മാറ്റങ്ങളും പുതിയ ഇവിടെ (<https://gitlab.com/smc/fonts/gayathri/>) ലഭ്യമാണ്.

ഓഫീസ് ഫോണ്ട് ലൈസൻസിലാണ് ഗായത്രി ഫോണ്ട് പുതിയിരക്കിയിരിക്കുന്നത്. കേരള ഭാഷാ ഇൻസ്റ്റിറ്റ്ച്ചറിന്റെ സാമ്പത്തിക സഹായത്തോടെയാണ് സ്വതന്ത്ര മലയാളം കമ്പ്യൂട്ടറിങ്ങ് ഗായത്രിയുടെ നിർമ്മാണം നിർവ്വഹിച്ചത്.

ഉപയോഗ മാതൃകകൾ

ഗായത്രിയിൽ തയ്യാറാക്കിയ ചില താഴ്കൾ കാണാം. തലക്കട്ടിൽ, ബുർബിൽ, ഗൈലർ എ കുറ്റിൽ എല്ലാം ഗായത്രിയുടെ പല കനങ്ങളിലുള്ള ഫോൺ ഉപയോഗിച്ചിരിക്കുന്നു.

സായരീ
സായരീ
സായരീ

Design: Binoy Dominic

Opentype engineering: Kavya Manohar

Project coordination: Santhosh Thottingal

സ്വതന്ത്ര മലയാളം കമ്പ്യൂട്ടീൻസ് - കേരള ഭാഷാ ഇൻസിറ്റുട്ട്
Download: <https://smc.org.in/fonts>

ചിത്രം 3: Available in three style variants



ചിത്രം 4: Sample texts

Gayathri

The quick brown fox jumps over a lazy dog
The quick brown fox jumps over a lazy dog
The quick brown fox jumps over a lazy dog

Ça me fait peur de fêter noël là, sur cette île bizarroïde où une mère et sa môme essaient de me tuer avec un gâteau à la cigüe brûlé.

Ça me fait peur de fêter noël là, sur cette île bizarroïde où une mère et sa môme essaient de me tuer avec un gâteau à la cigüe brûlé.

Ça me fait peur de fêter noël là, sur cette île bizarroïde où une mère et sa môme essaient de me tuer avec un gâteau à la cigüe brûlé.

ஷ்டு 5: Latin support

തിരമൊഴി

പി പി രാമചന്ദ്രൻ

“ ”

രേഖിയമായ തുടർച്ചയല്ല. അന്വേഷിയമായ പടർച്ചയാണ് തിരമൊഴിയുടെ ഘടന. വലക്കുറ്റികളേപ്പാലെ പരസ്യപരവൈസിതമായ പാംജോളേ തിരമൊഴിയില്ലെങ്കിൽ പിതൃടർച്ചാസംസ്കൃതിയിൽനിന്ന് (hierarchical culture) മുമ്പാംഗം സംസ്കാരിക്കുന്നതിൽ സൂചകം ഫ്രിയാണ് തിരമൊഴി.

” ”

ഭാഷയ്ക്ക് വാമൊഴിയെന്നും വരമൊഴിയെന്നും രണ്ട് വക്കേറേങ്ങൾ എന്നാണ് ഭാഷാവിദ്യാർത്ഥികളുടെ ആദ്യപാഠങ്ങളിലെണ്ടത്. വാക്കാണ്ട് മൊഴിയുന്നത് വരമൊഴി. വരച്ചുകാടുന്നത് വരമൊഴി. കൊപ്പുട്ടൻബേഡ് സഹായത്തോടെ ഭാഷയ്ക്ക് ലാഭിക്കുന്ന അധികമാനത്തെയാണ് ഇവിടെ തിരമൊഴി എന്ന പദംകൊണ്ട് വിവക്ഷിക്കുന്നത്. തിരയിൽ കാണാവുന്നതും എഴുതാവുന്നതും വായിക്കാവുന്നതുമായ മൊഴി എന്നോ തിരപോലെ അസ്ഥിരവും ഗ്രഹാ-തരസാധ്യതകളുള്ളതുമായ മൊഴി എന്നോ തിരയാവുന്ന മൊഴി എന്നോ ഒക്കെ മൂല പദത്തിന് നിശ്ചിപ്തതി പറയാം. ഇംഗ്ലീഷിൽ Hypertext എന്ന പദം കൊണ്ട് അർത്ഥമാക്കുന്നത് മലയാളത്തിൽ തിരമൊഴി എന്ന പദംകൊണ്ടും എൻറേക്കരെ സാധിക്കാമെന്നു വിചാരിക്കുന്നു. ഭാഷയുടെ പരിണാമചരിത്രം സാങ്കേതികവിദ്യയുടെ പരിണാമചരിത്രം തുടർച്ചാണ്. വാമൊഴിയിൽ നിന്ന് വരമൊഴിയിലേക്കും പിന്നീട് തിരമൊഴിയി-ലേക്കും അതു പരിണാമിക്കുന്നു. വിവരസാങ്കേതികവിദ്യയുടെ സുപ്രീഡാണ് തിരമൊഴി. സമസ്തവിവരങ്ങളും ഡിജിറ്റൽ ആയി രേഖപ്പെടുത്താനും സൂക്ഷിക്കാനും വിതരണം ചെയ്യാനും കഴിയുന്ന കാലത്തെ ഭാഷാസവിശേഷതയാണ്.

ചിത്രം 6: Sample article layout

വാക്കൊതരി
കുള്ളംവണം
തീർമ്മംമാർത്ത്
വള്ളംകളി
അയ്മനം



ചിത്രം 7: Stylistic variants

2019
ഡിസ്ട്രിക്ട് ഓഫീസ്

ചിത്രം 8: Malayalam numerals

സാങ്കേതിക വിവരാംഗങ്ങൾ

ശായത്രി പ്രോണ്ടിൽ ഉൾക്കൊള്ളിച്ചിട്ടുള്ള മൗവൻ അക്ഷരങ്ങളേയും കാറിച്ചുള്ള വിവരാംഗങ്ങൾ

Unicode characters	384
Glyphs	1124
Ligature glyphs	466
Mark glyphs	2

0.1 Summary

Unicode characters	384
Glyphs	1126
Ligature glyphs	466
Mark glyphs	2
Component glyphs	0

0.2 Font Metadata

Copyright	Digitized data copyright 2018, Binoy Dominic, Santhosh Thottingal, Kavya Manohar, Swathanthra Malayalam Computing, smc.org.in, with reserved font name "Gayathri".
Family	Gayathri
Subfamily	Regular
Full Name	Gayathri Regular
Version	Version 1.000
PostScript Name	Gayathri-Regular
Manufacturer	SMC
Designer	Binoy Dominic <binoy.domenic@gmail.com>
Description	A gentle and modern Malayalam display typeface. Available in three weights, Gayathri is best suited for headlines, posters, titles and captions. Unicode compliant and libre licensed.
Vendor URL	https://smc.org.in
License	This Font Software is licensed under the SIL Open Font License, Version 1.1. This license is available with a FAQ at: http://scripts.sil.org/OFL
License URL	http://scripts.sil.org/OFL

0.3 Block

0.3.1 0000 - 00FF

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0.3.2 0100 - 01FF

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A	Ć	Ę	Ī	□	0138	0148	0158	0168	0178	0188	0198	01A8	01B8	01C8	01D8	01E8	01F8
B	ć	ę	ī	□	0139	0149	0159	0169	0179	0189	0199	01A9	01B9	01C9	01D9	01E9	01F9
C	Ć	Ę	Ī	□	013A	014A	015A	016A	017A	018A	019A	01AA	01BA	01CA	01DA	01EA	01FA
D	ć	ę	ī	□	013B	014B	015B	016B	017B	018B	019B	01AB	01BB	01CB	01DB	01EB	01FB
E	Ć	Ĝ	□	□	013C	014C	015C	016C	017C	018C	019C	01AC	01BC	01CC	01DC	01EC	01FC
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	đ	□	□	□	013F	014F	015F	016F	017F	018F	019F	01AF	01BF	01CF	01DF	01EF	01FF

0.3.3 0D00 - 0DFF

	0D0	0D1	0D2	0D3	0D4	0D5	0D6	0D7	0D8	0D9	0DA	0DB	0DC	0DD	0DE
0	୦	ବ୍ୟ	୦	ୠ	୫	୦	୧୯	୨୦	୦	୦	୦	୦	୦	୦	୦
	0D00	0D10	0D20	0D30	0D40	0D50	0D60	0D70	0D80	0D90	0DA0	0DB0	0DC0	0DD0	0DE0
1	୪	୦	ୟ	୦	୩	୦	୩୭	୨୧	୦	୦	୦	୦	୦	୦	୦
	0D01	0D11	0D21	0D31	0D41	0D51	0D61	0D71	0D81	0D91	0DA1	0DB1	0DC1	0DD1	0DE1
2	୦୦	୩	୮୭	୮	୭୩	୦	୧୦	୧୦	୦	୦	୦	୦	୦	୦	୦
	0D02	0D12	0D22	0D32	0D42	0D52	0D62	0D72	0D82	0D92	0DA2	0DB2	0DC2	0DD2	0DE2
3	୦୯	୩୩	୮୮	୭୩	୭୩	୦	୧୭	୧୭	୦	୦	୦	୦	୦	୦	୦
	0D03	0D13	0D23	0D33	0D43	0D53	0D63	0D73	0D83	0D93	0DA3	0DB3	0DC3	0DD3	0DE3
4	୦	୩୩	୧୦	୧୦	୧୦	୦	୧୦	୧୦	୦	୦	୦	୦	୦	୦	୦
	0D04	0D14	0D24	0D34	0D44	0D54	0D64	0D74	0D84	0D94	0DA4	0DB4	0DC4	0DD4	0DE4
5	୩୦	୩	୮	୮	୮	୦	୧୮	୧୮	୦	୦	୦	୦	୦	୦	୦
	0D05	0D15	0D25	0D35	0D45	0D55	0D65	0D75	0D85	0D95	0DA5	0DB5	0DC5	0DD5	0DE5
6	୩୩	୩	୧	୧	୧	୦	୧୦	୧୦	୦	୦	୦	୦	୦	୦	୦
	0D06	0D16	0D26	0D36	0D46	0D56	0D66	0D76	0D86	0D96	0DA6	0DB6	0DC6	0DD6	0DE6
7	୮	୮	୧	୧	୧	୦	୧୦	୧୦	୦	୦	୦	୦	୦	୦	୦
	0D07	0D17	0D27	0D37	0D47	0D57	0D67	0D77	0D87	0D97	0DA7	0DB7	0DC7	0DD7	0DE7
8	୩୩	୩୩	୧୦	୧୦	୧୦	୦	୧୦	୧୦	୦	୦	୦	୦	୦	୦	୦
	0D08	0D18	0D28	0D38	0D48	0D58	0D68	0D78	0D88	0D98	0DA8	0DB8	0DC8	0DD8	0DE8
9	୧	୬୩	୩	୧୦	୧୦	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D09	0D19	0D29	0D39	0D49	0D59	0D69	0D79	0D89	0D99	0DA9	0DB9	0DC9	0DD9	0DE9
A	୩୩	୩	୧	୧	୫	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D0A	0D1A	0D2A	0D3A	0D4A	0D5A	0D6A	0D7A	0D8A	0D9A	0DAA	0DBA	0DCA	0DDA	0DEA
B	୩	୩୦	୧	୧	୧	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D0B	0D1B	0D2B	0D3B	0D4B	0D5B	0D6B	0D7B	0D8B	0D9B	0DAB	0DBB	0DCB	0DDB	0DEB
C	୮	୩୩	୧୦	୧୦	୧୦	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D0C	0D1C	0D2C	0D3C	0D4C	0D5C	0D6C	0D7C	0D8C	0D9C	0DAC	0DBC	0DCC	0DDC	0DEC
D	୦	୩୩	୧୦	୧୦	୧୦	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D0D	0D1D	0D2D	0D3D	0D4D	0D5D	0D6D	0D7D	0D8D	0D9D	0DAD	0DBD	0DCD	0DDD	0DED
E	୩୩	୩୩	୧୦	୧୦	୧୦	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D0E	0D1E	0D2E	0D3E	0D4E	0D5E	0D6E	0D7E	0D8E	0D9E	0DAE	0DBE	0DCE	0DDE	0DEE
F	୩୩	୩	୧୦	୧୦	୧୦	୦	୧୦	୧୦	୧	୧	୧	୧	୧	୧	୧
	0D0F	0D1F	0D2F	0D3F	0D4F	0D5F	0D6F	0D7F	0D8F	0D9F	0DAF	0DBF	0DCF	0DDF	0DEF

0.3.4 2000 - 20FF

	200	201	202	203	204	205	206	207	208	209	20A	20B	20C	20D	20E	20F
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	20A0	20B0	20C0	20D0	20E0	20F0
2	2001	2011	2021	2031	2041	2051	2061	2071	2081	2091	20A1	20B1	20C1	20D1	20E1	20F1
3	2002	2012	2022	2032	2042	2052	2062	2072	2082	2092	20A2	20B2	20C2	20D2	20E2	20F2
4	2003	2013	2023	2033	2043	2053	2063	2073	2083	2093	20A3	20B3	20C3	20D3	20E3	20F3
5	2004	2014	2024	2034	2044	2054	2064	2074	2084	2094	20A4	20B4	20C4	20D4	20E4	20F4
6	2005	2015	2025	2035	2045	2055	2065	2075	2085	2095	20A5	20B5	20C5	20D5	20E5	20F5
7	2006	2016	2026	2036	2046	2056	2066	2076	2086	2096	20A6	20B6	20C6	20D6	20E6	20F6
8	2007	2017	2027	2037	2047	2057	2067	2077	2087	2097	20A7	20B7	20C7	20D7	20E7	20F7
9	2008	2018	2028	2038	2048	2058	2068	2078	2088	2098	20A8	20B8	20C8	20D8	20E8	20F8
A	2009	2019	2029	2039	2049	2059	2069	2079	2089	2099	20A9	20B9	20C9	20D9	20E9	20F9
B	200A	201A	202A	203A	204A	205A	206A	207A	208A	209A	20AA	20BA	20CA	20DA	20EA	20FA
C	200B	201B	202B	203B	204B	205B	206B	207B	208B	209B	20AB	20BB	20CB	20DB	20EB	20FB
D	200C	201C	202C	203C	204C	205C	206C	207C	208C	209C	20AC	20BC	20CC	20DC	20EC	20FC
E	200D	201D	202D	203D	204D	205D	206D	207D	208D	209D	20AD	20BD	20CD	20DD	20ED	20FD
F	200E	201E	202E	203E	204E	205E	206E	207E	208E	209E	20AE	20BE	20CE	20DE	20EE	20FE
	200F	201F	202F	203F	204F	205F	206F	207F	208F	209F	20AF	20BF	20CF	20DF	20EF	20FF

0.3.5 2500 - 25FF

	250	251	252	253	254	255	256	257	258	259	25A	25B	25C	25D	25E	25F
0	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
1	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	25A0	25B0	25C0	25D0	25E0	25F0
2	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
3	2501	2511	2521	2531	2541	2551	2561	2571	2581	2591	25A1	25B1	25C1	25D1	25E1	25F1
4	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
5	2502	2512	2522	2532	2542	2552	2562	2572	2582	2592	25A2	25B2	25C2	25D2	25E2	25F2
6	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
7	2503	2513	2523	2533	2543	2553	2563	2573	2583	2593	25A3	25B3	25C3	25D3	25E3	25F3
8	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
9	2504	2514	2524	2534	2544	2554	2564	2574	2584	2594	25A4	25B4	25C4	25D4	25E4	25F4
A	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
B	2505	2515	2525	2535	2545	2555	2565	2575	2585	2595	25A5	25B5	25C5	25D5	25E5	25F5
C	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
D	2506	2516	2526	2536	2546	2556	2566	2576	2586	2596	25A6	25B6	25C6	25D6	25E6	25F6
E	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
F	2507	2517	2527	2537	2547	2557	2567	2577	2587	2597	25A7	25B7	25C7	25D7	25E7	25F7
0	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
1	2508	2518	2528	2538	2548	2558	2568	2578	2588	2598	25A8	25B8	25C8	25D8	25E8	25F8
2	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
3	2509	2519	2529	2539	2549	2559	2569	2579	2589	2599	25A9	25B9	25C9	25D9	25E9	25F9
4	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
5	250A	251A	252A	253A	254A	255A	256A	257A	258A	259A	25AA	25BA	25CA	25DA	25EA	25FA
6	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
7	250B	251B	252B	253B	254B	255B	256B	257B	258B	259B	25AB	25BB	25CB	25DB	25EB	25FB
8	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
9	250C	251C	252C	253C	254C	255C	256C	257C	258C	259C	25AC	25BC	25CC	25DC	25EC	25FC
A	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
B	250D	251D	252D	253D	254D	255D	256D	257D	258D	259D	25AD	25BD	25CD	25DD	25ED	25FD
C	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
D	250E	251E	252E	253E	254E	255E	256E	257E	258E	259E	25AE	25BE	25CE	25DE	25EE	25FE
E	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
F	250F	251F	252F	253F	254F	255F	256F	257F	258F	259F	25AF	25BF	25CF	25DF	25EF	25FF

0.4 Unicode Coverage

0020	SPACE
0021	! EXCLAMATION MARK
0022	" QUOTATION MARK
0023	# NUMBER SIGN
0024	\$ DOLLAR SIGN
0025	% PERCENT SIGN
0026	& AMPERSAND
0027	' APOSTROPHE
0028	(LEFT PARENTHESIS
0029) RIGHT PARENTHESIS
002A	* ASTERISK
002B	+ PLUS SIGN
002C	,
002D	- HYPHEN-MINUS
002E	.
002F	/ SOLIDUS
0030	0 DIGIT ZERO
0031	1 DIGIT ONE
0032	2 DIGIT TWO
0033	3 DIGIT THREE
0034	4 DIGIT FOUR
0035	5 DIGIT FIVE
0036	6 DIGIT SIX
0037	7 DIGIT SEVEN
0038	8 DIGIT EIGHT
0039	9 DIGIT NINE
003A	:
003B	;
003C	< LESS-THAN SIGN
003D	= EQUALS SIGN
003E	> GREATER-THAN SIGN
003F	? QUESTION MARK
0040	@ COMMERCIAL AT
0041	A LATIN CAPITAL LETTER A
0042	B LATIN CAPITAL LETTER B
0043	C LATIN CAPITAL LETTER C
0044	D LATIN CAPITAL LETTER D
0045	E LATIN CAPITAL LETTER E
0046	F LATIN CAPITAL LETTER F
0047	G LATIN CAPITAL LETTER G
0048	H LATIN CAPITAL LETTER H
0049	I LATIN CAPITAL LETTER I

004A	J	LATIN CAPITAL LETTER J
004B	K	LATIN CAPITAL LETTER K
004C	L	LATIN CAPITAL LETTER L
004D	M	LATIN CAPITAL LETTER M
004E	N	LATIN CAPITAL LETTER N
004F	O	LATIN CAPITAL LETTER O
0050	P	LATIN CAPITAL LETTER P
0051	Q	LATIN CAPITAL LETTER Q
0052	R	LATIN CAPITAL LETTER R
0053	S	LATIN CAPITAL LETTER S
0054	T	LATIN CAPITAL LETTER T
0055	U	LATIN CAPITAL LETTER U
0056	V	LATIN CAPITAL LETTER V
0057	W	LATIN CAPITAL LETTER W
0058	X	LATIN CAPITAL LETTER X
0059	Y	LATIN CAPITAL LETTER Y
005A	Z	LATIN CAPITAL LETTER Z
005B	[LEFT SQUARE BRACKET
005C	\	REVERSE SOLIDUS
005D]	RIGHT SQUARE BRACKET
005E	^	CIRCUMFLEX ACCENT
005F	_	LOW LINE
0060	`	GRAVE ACCENT
0061	a	LATIN SMALL LETTER A
0062	b	LATIN SMALL LETTER B
0063	c	LATIN SMALL LETTER C
0064	d	LATIN SMALL LETTER D
0065	e	LATIN SMALL LETTER E
0066	f	LATIN SMALL LETTER F
0067	g	LATIN SMALL LETTER G
0068	h	LATIN SMALL LETTER H
0069	i	LATIN SMALL LETTER I
006A	j	LATIN SMALL LETTER J
006B	k	LATIN SMALL LETTER K
006C	l	LATIN SMALL LETTER L
006D	m	LATIN SMALL LETTER M
006E	n	LATIN SMALL LETTER N
006F	o	LATIN SMALL LETTER O
0070	p	LATIN SMALL LETTER P
0071	q	LATIN SMALL LETTER Q
0072	r	LATIN SMALL LETTER R
0073	s	LATIN SMALL LETTER S
0074	t	LATIN SMALL LETTER T

0075	u	LATIN SMALL LETTER U
0076	v	LATIN SMALL LETTER V
0077	w	LATIN SMALL LETTER W
0078	x	LATIN SMALL LETTER X
0079	y	LATIN SMALL LETTER Y
007A	z	LATIN SMALL LETTER Z
007B	{	LEFT CURLY BRACKET
007C		VERTICAL LINE
007D	}	RIGHT CURLY BRACKET
007E	~	TILDE
00A0		NO-BREAK SPACE
2 visible characters not mapped to glyphs		
00A3	£	POUND SIGN
1 visible characters not mapped to glyphs		
00A5	¥	YEN SIGN
2 visible characters not mapped to glyphs		
00A8	“	DIAERESIS
00A9	©	COPYRIGHT SIGN
1 visible characters not mapped to glyphs		
00AB	«	LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
1 visible characters not mapped to glyphs		
00AD	-	SOFT HYPHEN
00AE	®	REGISTEgray SIGN
00AF	-	MACRON
00B0	°	DEGREE SIGN
1 visible characters not mapped to glyphs		
00B2	²	SUPERSCRIPT TWO
00B3	³	SUPERSCRIPT THREE
00B4	‘	ACUTE ACCENT
1 visible characters not mapped to glyphs		
00B6	¶	PILCROW SIGN
1 visible characters not mapped to glyphs		
00B8	ſ	CEDILLA
00B9	¹	SUPERSCRIPT ONE
1 visible characters not mapped to glyphs		
00BB	»	RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
3 visible characters not mapped to glyphs		
00BF	՞	INVERTED QUESTION MARK
00C0	À	LATIN CAPITAL LETTER A WITH GRAVE
00C1	Á	LATIN CAPITAL LETTER A WITH ACUTE
00C2	Â	LATIN CAPITAL LETTER A WITH CIRCUMFLEX
00C3	Ã	LATIN CAPITAL LETTER A WITH TILDE
00C4	Ä	LATIN CAPITAL LETTER A WITH DIAERESIS

00C5	Å	LATIN CAPITAL LETTER A WITH RING ABOVE
00C6	Æ	LATIN CAPITAL LETTER AE
00C7	Ç	LATIN CAPITAL LETTER C WITH CEDILLA
00C8	È	LATIN CAPITAL LETTER E WITH GRAVE
00C9	É	LATIN CAPITAL LETTER E WITH ACUTE
00CA	Ê	LATIN CAPITAL LETTER E WITH CIRCUMFLEX
00CB	Ë	LATIN CAPITAL LETTER E WITH DIAERESIS
00CC	Ì	LATIN CAPITAL LETTER I WITH GRAVE
00CD	Í	LATIN CAPITAL LETTER I WITH ACUTE
00CE	Î	LATIN CAPITAL LETTER I WITH CIRCUMFLEX
00CF	Ï	LATIN CAPITAL LETTER I WITH DIAERESIS
00D0	Ð	LATIN CAPITAL LETTER ETH
00D1	Ñ	LATIN CAPITAL LETTER N WITH TILDE
00D2	Ò	LATIN CAPITAL LETTER O WITH GRAVE
00D3	Ó	LATIN CAPITAL LETTER O WITH ACUTE
00D4	Ô	LATIN CAPITAL LETTER O WITH CIRCUMFLEX
00D5	Õ	LATIN CAPITAL LETTER O WITH TILDE
00D6	Ö	LATIN CAPITAL LETTER O WITH DIAERESIS
00D7	×	MULTIPLICATION SIGN
00D8	Ø	LATIN CAPITAL LETTER O WITH STROKE
00D9	Ù	LATIN CAPITAL LETTER U WITH GRAVE
00DA	Ú	LATIN CAPITAL LETTER U WITH ACUTE
00DB	Û	LATIN CAPITAL LETTER U WITH CIRCUMFLEX
00DC	Ü	LATIN CAPITAL LETTER U WITH DIAERESIS
00DD	Ý	LATIN CAPITAL LETTER Y WITH ACUTE
00DE	Þ	LATIN CAPITAL LETTER THORN
00DF	Ը	LATIN SMALL LETTER SHARP S
00E0	à	LATIN SMALL LETTER A WITH GRAVE
00E1	á	LATIN SMALL LETTER A WITH ACUTE
00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
00E3	ã	LATIN SMALL LETTER A WITH TILDE
00E4	ä	LATIN SMALL LETTER A WITH DIAERESIS
00E5	å	LATIN SMALL LETTER A WITH RING ABOVE
00E6	æ	LATIN SMALL LETTER AE
00E7	ç	LATIN SMALL LETTER C WITH CEDILLA
00E8	è	LATIN SMALL LETTER E WITH GRAVE
00E9	é	LATIN SMALL LETTER E WITH ACUTE
00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
00EB	ë	LATIN SMALL LETTER E WITH DIAERESIS
00EC	ì	LATIN SMALL LETTER I WITH GRAVE
00ED	í	LATIN SMALL LETTER I WITH ACUTE
00EE	î	LATIN SMALL LETTER I WITH CIRCUMFLEX
00EF	ï	LATIN SMALL LETTER I WITH DIAERESIS

00F0	ð	LATIN SMALL LETTER ETH
00F1	ñ	LATIN SMALL LETTER N WITH TILDE
00F2	ö	LATIN SMALL LETTER O WITH GRAVE
00F3	ó	LATIN SMALL LETTER O WITH ACUTE
00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
00F5	œ	LATIN SMALL LETTER O WITH TILDE
00F6	ö	LATIN SMALL LETTER O WITH DIAERESIS
00F7	÷	DIVISION SIGN
00F8	ø	LATIN SMALL LETTER O WITH STROKE
00F9	ù	LATIN SMALL LETTER U WITH GRAVE
00FA	ú	LATIN SMALL LETTER U WITH ACUTE
00FB	û	LATIN SMALL LETTER U WITH CIRCUMFLEX
00FC	ü	LATIN SMALL LETTER U WITH DIAERESIS
00FD	ý	LATIN SMALL LETTER Y WITH ACUTE
00FE	þ	LATIN SMALL LETTER THORN
00FF	ÿ	LATIN SMALL LETTER Y WITH DIAERESIS
0100	Ā	LATIN CAPITAL LETTER A WITH MACRON
0101	ā	LATIN SMALL LETTER A WITH MACRON
4 visible characters not mapped to glyphs		
0106	Ć	LATIN CAPITAL LETTER C WITH ACUTE
0107	ć	LATIN SMALL LETTER C WITH ACUTE
0108	Ĉ	LATIN CAPITAL LETTER C WITH CIRCUMFLEX
0109	ĉ	LATIN SMALL LETTER C WITH CIRCUMFLEX
010A	Ċ	LATIN CAPITAL LETTER C WITH DOT ABOVE
010B	ċ	LATIN SMALL LETTER C WITH DOT ABOVE
010C	Č	LATIN CAPITAL LETTER C WITH CARON
010D	č	LATIN SMALL LETTER C WITH CARON
010E	Ď	LATIN CAPITAL LETTER D WITH CARON
3 visible characters not mapped to glyphs		
0112	Ē	LATIN CAPITAL LETTER E WITH MACRON
0113	ē	LATIN SMALL LETTER E WITH MACRON
2 visible characters not mapped to glyphs		
0116	Ē	LATIN CAPITAL LETTER E WITH DOT ABOVE
0117	ē	LATIN SMALL LETTER E WITH DOT ABOVE
2 visible characters not mapped to glyphs		
011A	Ě	LATIN CAPITAL LETTER E WITH CARON
011B	ě	LATIN SMALL LETTER E WITH CARON
011C	Ĝ	LATIN CAPITAL LETTER G WITH CIRCUMFLEX
011D	ĝ	LATIN SMALL LETTER G WITH CIRCUMFLEX
2 visible characters not mapped to glyphs		
0120	Ĝ	LATIN CAPITAL LETTER G WITH DOT ABOVE
0121	ĝ	LATIN SMALL LETTER G WITH DOT ABOVE
2 visible characters not mapped to glyphs		

0124	[^] H	LATIN CAPITAL LETTER H WITH CIRCUMFLEX
0125	[^] h	LATIN SMALL LETTER H WITH CIRCUMFLEX
2 visible characters not mapped to glyphs		
0128	[~] I	LATIN CAPITAL LETTER I WITH TILDE
0129	[~] i	LATIN SMALL LETTER I WITH TILDE
012A	[̄] I	LATIN CAPITAL LETTER I WITH MACRON
012B	[̄] i	LATIN SMALL LETTER I WITH MACRON
5 visible characters not mapped to glyphs		
0131	I	LATIN SMALL LETTER DOTLESS I
17 visible characters not mapped to glyphs		
0143	^ˊ N	LATIN CAPITAL LETTER N WITH ACUTE
0144	^ˊ n	LATIN SMALL LETTER N WITH ACUTE
2 visible characters not mapped to glyphs		
0147	^ˇ N	LATIN CAPITAL LETTER N WITH CARON
0148	^ˇ n	LATIN SMALL LETTER N WITH CARON
3 visible characters not mapped to glyphs		
014C	[̄] O	LATIN CAPITAL LETTER O WITH MACRON
014D	[̄] o	LATIN SMALL LETTER O WITH MACRON
4 visible characters not mapped to glyphs		
0152	^œ	LATIN CAPITAL LIGATURE OE
0153	^œ	LATIN SMALL LIGATURE OE
0154	^ˊ R	LATIN CAPITAL LETTER R WITH ACUTE
0155	^ˊ r	LATIN SMALL LETTER R WITH ACUTE
2 visible characters not mapped to glyphs		
0158	^ˇ R	LATIN CAPITAL LETTER R WITH CARON
0159	^ˇ r	LATIN SMALL LETTER R WITH CARON
015A	^ˊ S	LATIN CAPITAL LETTER S WITH ACUTE
015B	^ˊ s	LATIN SMALL LETTER S WITH ACUTE
015C	[^] S	LATIN CAPITAL LETTER S WITH CIRCUMFLEX
015D	[^] s	LATIN SMALL LETTER S WITH CIRCUMFLEX
015E	[¸] S	LATIN CAPITAL LETTER S WITH CEDILLA
015F	[¸] s	LATIN SMALL LETTER S WITH CEDILLA
0160	^ˇ S	LATIN CAPITAL LETTER S WITH CARON
0161	^ˇ s	LATIN SMALL LETTER S WITH CARON
6 visible characters not mapped to glyphs		
0168	[~] U	LATIN CAPITAL LETTER U WITH TILDE
0169	[~] u	LATIN SMALL LETTER U WITH TILDE
016A	[̄] U	LATIN CAPITAL LETTER U WITH MACRON
016B	[̄] u	LATIN SMALL LETTER U WITH MACRON
2 visible characters not mapped to glyphs		
016E	^ø U	LATIN CAPITAL LETTER U WITH RING ABOVE
016F	^ø u	LATIN SMALL LETTER U WITH RING ABOVE
4 visible characters not mapped to glyphs		

0174	Ŵ	LATIN CAPITAL LETTER W WITH CIRCUMFLEX
0175	ŵ	LATIN SMALL LETTER W WITH CIRCUMFLEX
0176	Ŷ	LATIN CAPITAL LETTER Y WITH CIRCUMFLEX
0177	ŷ	LATIN SMALL LETTER Y WITH CIRCUMFLEX
2 visible characters not mapped to glyphs		
017A	Ź	LATIN SMALL LETTER Z WITH ACUTE
017B	Ž	LATIN CAPITAL LETTER Z WITH DOT ABOVE
017C	ż	LATIN SMALL LETTER Z WITH DOT ABOVE
017D	Ž	LATIN CAPITAL LETTER Z WITH CARON
017E	ȝ	LATIN SMALL LETTER Z WITH CARON
83 visible characters not mapped to glyphs		
01D2	ጀ	LATIN SMALL LETTER O WITH CARON
01D3	ጀ	LATIN CAPITAL LETTER U WITH CARON
01D4	ጀ	LATIN SMALL LETTER U WITH CARON
39 visible characters not mapped to glyphs		
01FC	ጀጀ	LATIN CAPITAL LETTER AE WITH ACUTE
01FD	ጀጀ	LATIN SMALL LETTER AE WITH ACUTE
2216 visible characters not mapped to glyphs		
0D00	ጀ	
0D01	ጀ	
0D02	ጀጀ	MALAYALAM SIGN ANUSVARA
0D03	ጀጀ	MALAYALAM SIGN VISARGA
0D05	ጀጀ	MALAYALAM LETTER A
0D06	ጀጀ	MALAYALAM LETTER AA
0D07	ጀጀ	MALAYALAM LETTER I
0D08	ጀጀ	MALAYALAM LETTER II
0D09	ጀጀ	MALAYALAM LETTER U
0D0A	ጀጀ	MALAYALAM LETTER UU
0D0B	ጀጀ	MALAYALAM LETTER VOCALIC R
0D0C	ጀጀ	MALAYALAM LETTER VOCALIC L
0D0E	ጀጀ	MALAYALAM LETTER E
0D0F	ጀጀ	MALAYALAM LETTER EE
0D10	ጀጀ	MALAYALAM LETTER AI
0D12	ጀጀ	MALAYALAM LETTER O
0D13	ጀጀ	MALAYALAM LETTER OO
0D14	ጀጀ	MALAYALAM LETTER AU
0D15	ጀጀ	MALAYALAM LETTER KA
0D16	ጀጀ	MALAYALAM LETTER KHA
0D17	ጀጀ	MALAYALAM LETTER GA
0D18	ጀጀ	MALAYALAM LETTER GHA
0D19	ጀጀ	MALAYALAM LETTER NGA
0D1A	ጀጀ	MALAYALAM LETTER CA
0D1B	ጀጀ	MALAYALAM LETTER CHA

0D1C	ാ	MALAYALAM LETTER JA
0D1D	ി	MALAYALAM LETTER JHA
0D1E	ം	MALAYALAM LETTER NYA
0D1F	ഃ	MALAYALAM LETTER TTA
0D20	ഒ	MALAYALAM LETTER TTHA
0D21	ഔ	MALAYALAM LETTER DDA
0D22	ഉ	MALAYALAM LETTER DDHA
0D23	ഊ	MALAYALAM LETTER NNA
0D24	ഋ	MALAYALAM LETTER TA
0D25	ി	MALAYALAM LETTER THA
0D26	ഃ	MALAYALAM LETTER DA
0D27	ഔ	MALAYALAM LETTER DHA
0D28	ാ	MALAYALAM LETTER NA
0D29	ാ	
0D2A	ാ	MALAYALAM LETTER PA
0D2B	ാ	MALAYALAM LETTER PHA
0D2C	ാ	MALAYALAM LETTER BA
0D2D	ഃ	MALAYALAM LETTER BHA
0D2E	ഋ	MALAYALAM LETTER MA
0D2F	ഉ	MALAYALAM LETTER YA
0D30	ഋ	MALAYALAM LETTER RA
0D31	ഋ	MALAYALAM LETTER RRA
0D32	ാ	MALAYALAM LETTER LA
0D33	ാ	MALAYALAM LETTER LLA
0D34	ാ	MALAYALAM LETTER LLLA
0D35	ഋ	MALAYALAM LETTER VA
0D36	ഃ	MALAYALAM LETTER SHA
0D37	ഉ	MALAYALAM LETTER SSA
0D38	ം	MALAYALAM LETTER SA
0D39	ഔ	MALAYALAM LETTER HA
0D3A	ഄ	
0D3B	ം	
0D3C	ം	
0D3D	ം	MALAYALAM SIGN AVAGRAHA
0D3E	ാ	MALAYALAM VOWEL SIGN AA
0D3F	ി	MALAYALAM VOWEL SIGN I
0D40	ം	MALAYALAM VOWEL SIGN II
0D41	ം	MALAYALAM VOWEL SIGN U
0D42	ം	MALAYALAM VOWEL SIGN UU
0D43	ം	MALAYALAM VOWEL SIGN VOCALIC R
0D44	ം	MALAYALAM VOWEL SIGN VOCALIC RR
0D46	ാ	MALAYALAM VOWEL SIGN E
0D47	ാ	MALAYALAM VOWEL SIGN EE

0D48	ാ	MALAYALAM VOWEL SIGN AI
0D4A	ോ	MALAYALAM VOWEL SIGN O
0D4B	ോ	MALAYALAM VOWEL SIGN OO
0D4C	ോ	MALAYALAM VOWEL SIGN AU
0D4D	്	MALAYALAM SIGN VIRAMA
0D4E	ঁ	
0D4F	ঁ	
0D54	ঁ	
0D55	ঁ	
0D56	ঁ	
0D57	ঁ	MALAYALAM AU LENGTH MARK
0D58	ঁ	
0D59	ঁ	
0D5A	ঁ	
0D5B	ঁ	
0D5C	ঁ	
0D5D	ঁ	
0D5E	ঁ	
0D5F	ঁ	
0D60	ঁ	MALAYALAM LETTER VOCALIC RR
0D61	ঁ	MALAYALAM LETTER VOCALIC LL
0D62	ঁ	MALAYALAM VOWEL SIGN VOCALIC L
0D63	ঁ	MALAYALAM VOWEL SIGN VOCALIC LL
0D66	০	MALAYALAM DIGIT ZERO
0D67	১	MALAYALAM DIGIT ONE
0D68	২	MALAYALAM DIGIT TWO
0D69	৩	MALAYALAM DIGIT THREE
0D6A	৪	MALAYALAM DIGIT FOUR
0D6B	৫	MALAYALAM DIGIT FIVE
0D6C	৬	MALAYALAM DIGIT SIX
0D6D	৭	MALAYALAM DIGIT SEVEN
0D6E	৮	MALAYALAM DIGIT EIGHT
0D6F	৯	MALAYALAM DIGIT NINE
0D70	୧	MALAYALAM NUMBER TEN
0D71	୧	MALAYALAM NUMBER ONE HUNDgray
0D72	୧	MALAYALAM NUMBER ONE THOUSAND
0D73	୧	MALAYALAM FRACTION ONE QUARTER
0D74	୧	MALAYALAM FRACTION ONE HALF
0D75	୧	MALAYALAM FRACTION THREE QUARTERS
0D76	୧	
0D77	୧	
0D78	୧	
0D79	୧	MALAYALAM DATE MARK

0D7A		MALAYALAM LETTER CHILLU NN
0D7B		MALAYALAM LETTER CHILLU N
0D7C		MALAYALAM LETTER CHILLU RR
0D7D		MALAYALAM LETTER CHILLU L
0D7E		MALAYALAM LETTER CHILLU LL
0D7F		MALAYALAM LETTER CHILLU K
		4012 visible characters not mapped to glyphs
200C		ZERO WIDTH NON-JOINER
200D		ZERO WIDTH JOINER
		3 visible characters not mapped to glyphs
2013		EN DASH
2014		EM DASH
		3 visible characters not mapped to glyphs
2018		LEFT SINGLE QUOTATION MARK
2019		RIGHT SINGLE QUOTATION MARK
201A		SINGLE LOW-9 QUOTATION MARK
		1 visible characters not mapped to glyphs
201C		LEFT DOUBLE QUOTATION MARK
201D		RIGHT DOUBLE QUOTATION MARK
201E		DOUBLE LOW-9 QUOTATION MARK
		3 visible characters not mapped to glyphs
2022		BULLET
		3 visible characters not mapped to glyphs
2026		HORIZONTAL ELLIPSIS
		52 visible characters not mapped to glyphs
2070		SUPERSCRIPT ZERO
		1 visible characters not mapped to glyphs
2074		SUPERSCRIPT FOUR
2075		SUPERSCRIPT FIVE
2076		SUPERSCRIPT SIX
2077		SUPERSCRIPT SEVEN
2078		SUPERSCRIPT EIGHT
2079		SUPERSCRIPT NINE
		38 visible characters not mapped to glyphs
20AC		EURO SIGN
		12 visible characters not mapped to glyphs
20B9		
		1186 visible characters not mapped to glyphs
25CC		DOTTED CIRCLE

0.5 Glyphs

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
0	□	.notdef	692	45	1	
1	.	.null	0	0	1	
2		nonmarkingreturn	682	0	1	
3		space	500	0	1	u0020
4	!	exclam	380	99	1	u0021
5	"	quotedbl	628	97	1	u0022
6	#	numbersign	1349	100	1	u0023
7	\$	dollar	1142	100	1	u0024
8	%	percent	1684	99	1	u0025
9	&	ampersand	1316	100	1	u0026
10	'	quotesingle	380	97	1	u0027
11	(parenleft	679	100	1	u0028
12)	parenright	679	100	1	u0029
13	*	asterisk	639	50	1	u002A
14	+	plus	1050	100	1	u002B
15	,	comma	354	80	1	u002C
16	-	hyphen	813	100	1	u002D
17	.	period	380	100	1	u002E
18	/	slash	848	100	1	u002F
19	0	zero	1128	80	1	u0030
20	1	one	617	50	1	u0031
21	2	two	1119	100	1	u0032
22	3	three	1109	100	1	u0033
23	4	four	1156	50	1	u0034
24	5	five	1133	100	1	u0035
25	6	six	1157	100	1	u0036
26	7	seven	1066	50	1	u0037
27	8	eight	1149	100	1	u0038
28	9	nine	1157	100	1	u0039
29	⁰	zero_super	485	0	0	u2070
30	¹	one_super	249	-3	0	u00B9
31	²	two_super	453	0	0	u00B2
32	³	three_super	457	0	0	u00B3
33	⁴	four_super	526	0	0	u2074
34	⁵	five_super	460	0	0	u2075
35	⁶	six_super	478	-1	0	u2076
36	⁷	seven_super	475	0	0	u2077
37	⁸	eight_super	476	0	0	u2078
38	⁹	nine_super	478	0	0	u2079
39	:	colon	380	100	1	u003A
40	;	semicolon	394	100	1	u003B
41	<	less	1196	100	1	u003C
42	=	equal	1068	100	1	u003D

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
43	>	greater	1196	100	1	u003E
44	?	question	1096	100	1	u003F
45	¿	questiondown	1096	100	0	u00BF
46	@	at	1947	100	1	u0040
47	{	braceleft	648	50	1	u007B
48		bar	315	100	1	u007C
49	¶	paragraph	1051	100	0	u00B6
50	}	braceright	649	51	1	u007D
51	'	quotyleft	294	120	0	u2018
52	'	quoteright	294	-20	0	u2019
53	,	quotesinglbase	394	80	0	u201A
54	“	quotedblleft	536	120	0	u201C
55	”	quotedblright	536	-20	0	u201D
56	„	quotedblbase	572	16	0	u201E
57	«	guillemotleft	942	100	0	u00AB
58	»	guillemotright	942	100	0	u00BB
59	•	bullet	470	80	0	u2022
60	–	endash	992	100	0	u2013
61	—	emdash	1431	100	0	u2014
62	×	multiply	920	100	0	u00D7
63	©	copyright	1308	100	0	u00A9
64	®	registegray	1308	100	0	u00AE
65	÷	divide	963	50	0	u00F7
66	uni0000		0	0	0	
67	uni00AD		40	0	1	u00AD
68	…	ellipsis	1159	100	0	u2026
69	uni00A0		500	0	0	u00A0
70	~	asciitilde	1275	99	1	u007E
71	‘	acute	569	80	0	u00B4
72	°	degree	593	0	0	u00B0
73	˙	dieresis	576	80	0	u00A8
74	[bracketleft	774	100	0	u005B
75	\	backslash	848	100	0	u005C
76]	bracketright	774	100	0	u005D
77	^	asciicircum	768	100	0	u005E
78	_	underscore	1275	100	0	u005F
79	`	grave	489	0	0	u0060
80	‐	macron	629	50	0	u00AF
81	,	cedilla	436	0	0	u00B8
82	á	a	1106	75	1	u0061
83	í	b	1134	100	1	u0062
84	ó	c	1084	49	1	u0063
85	đ	d	1134	50	1	u0064

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
86	e	e	1146	50	1	u0065
87	f	f	766	25	1	u0066
88	g	g	1132	50	1	u0067
89	h	h	1070	100	1	u0068
90	i	i	330	75	1	u0069
91	j	j	639	25	1	u006A
92	k	k	1068	99	1	u006B
93	l	l	313	75	1	u006C
94	m	m	1725	100	1	u006D
95	n	n	1120	100	1	u006E
96	o	o	1150	50	1	u006F
97	p	p	1134	100	1	u0070
98	q	q	1134	50	1	u0071
99	r	r	764	100	1	u0072
100	s	s	956	50	1	u0073
101	t	t	769	25	1	u0074
102	u	u	1120	100	1	u0075
103	v	v	1036	25	1	u0076
104	w	w	1601	25	1	u0077
105	x	x	1005	25	1	u0078
106	y	y	1120	100	1	u0079
107	z	z	1009	25	1	u007A
108	A	A	1373	25	1	u0041
109	B	B	1265	100	1	u0042
110	C	C	1342	50	1	u0043
111	D	D	1315	100	1	u0044
112	E	E	1243	100	1	u0045
113	F	F	1153	100	1	u0046
114	G	G	1451	50	1	u0047
115	H	H	1346	100	1	u0048
116	I	I	263	50	1	u0049
117	J	J	926	25	1	u004A
118	K	K	1227	99	1	u004B
119	L	L	1059	100	1	u004C
120	M	M	1549	100	1	u004D
121	N	N	1358	100	1	u004E
122	O	O	1446	50	1	u004F
123	P	P	1272	100	1	u0050
124	Q	Q	1479	50	1	u0051
125	R	R	1343	100	1	u0052
126	S	S	1240	50	1	u0053
127	T	T	1225	25	1	u0054
128	U	U	1309	100	1	u0055

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
129	V	V	1337	25	1	u0056
130	W	W	1877	25	1	u0057
131	X	X	1252	25	1	u0058
132	Y	Y	1256	25	1	u0059
133	Z	Z	1278	25	1	u005A
134	À	Agrave	1373	25	0	u00C0
135	Â	Acircumflex	1373	25	0	u00C2
136	Ã	Atilde	1373	25	0	u00C3
137	Á	Aacute	1373	25	0	u00C1
138	Å	Aring	1373	25	0	u00C5
139	Ä	Adieresis	1373	25	0	u00C4
140	Ā	Amacron	1373	25	0	u0100
141	Æ	AE	2014	25	0	u00C6
142	Ǽ	AEacute	2013	25	0	u01FC
143	Ć	Cacute	1342	50	0	u0106
144	Ĉ	Ccircumflex	1342	50	0	u0108
145	�	Ccaron	1342	50	0	u010C
146	�	Ccedilla	1342	50	0	u00C7
147	�	Cdotaccent	1342	50	0	u010A
148	�	Dcaron	1315	100	0	u010E
149	�	Ecircumflex	1243	100	0	u00CA
150	�	Egrave	1243	100	0	u00C8
151	�	Eacute	1243	100	0	u00C9
152	�	Edotaccent	1243	100	0	u0116
153	�	Edieresis	1243	100	0	u00CB
154	�	Ecaron	1243	100	0	u011A
155	�	Emacron	1243	100	0	u0112
156	�	Gcircumflex	1451	50	0	u011C
157	�	Gdotaccent	1451	50	0	u0120
158	�	Hcircumflex	1346	100	0	u0124
159	�	Igrave	263	-305	0	u00CC
160	�	Iacute	263	50	0	u00CD
161	�	Icircumflex	263	-151	0	u00CE
162	�	Idieresis	263	-78	0	u00CF
163	�	Itilde	263	-407	0	u0128
164	�	Imacron	263	-133	0	u012A
165	�	Nacute	1358	100	0	u0143
166	�	Ncaron	1358	100	0	u0147
167	�	Ntilde	1358	100	0	u00D1
168	�	Ocircumflex	1446	50	0	u00D4
169	�	Otilde	1446	50	0	u00D5
170	�	Odieresis	1446	50	0	u00D6
171	�	Oacute	1446	50	0	u00D3

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
172	Ò	Ograve	1446	50	0	u00D2
173	Ó	Omacron	1446	50	0	u014C
174	Ø	Oslash	1506	80	0	u00D8
175	Œ	OE	2210	50	0	u0152
176	Ŕ	Rcaron	1343	100	0	u0158
177	Ŕ	Racute	1343	100	0	u0154
178	Â	Scircumflex	1240	50	0	u015C
179	Á	Sacute	1240	50	0	u015A
180	Š	Scaron	1240	50	0	u0160
181	Ş	Scedilla	1240	50	0	u015E
182	Û	Ucircumflex	1309	100	0	u00DB
183	Ù	Ugrave	1309	100	0	u00D9
184	Ú	Uacute	1309	100	0	u00DA
185	Ü	Udieresis	1309	100	0	u00DC
186	Ü	Utilde	1309	99	0	u0168
187	Ü	Umacron	1309	100	0	u016A
188	Ö	Uring	1309	100	0	u016E
189	Ľ	uni01D3	1309	100	0	u01D3
190	Ŵ	Wcircumflex	1877	25	0	u0174
191	Ý	Yacute	1256	25	0	u00DD
192	Ŷ	Ycircumflex	1256	25	0	u0176
193	Ž	Zcaron	1278	25	0	u017D
194	Ž	Zdotaccent	1278	25	0	u017B
195	À	acircumflex	1106	75	0	u00E2
196	à	agrave	1106	75	0	u00E0
197	á	aacute	1106	75	0	u00E1
198	å	aring	1106	75	0	u00E5
199	ã	adieresis	1106	75	0	u00E4
200	ã	amacron	1106	75	0	u0101
201	ã	atilde	1106	19	0	u00E3
202	æ	ae	1882	75	0	u00E6
203	áé	aeacute	1882	75	0	u01FD
204	ç	ccedilla	1084	49	0	u00E7
205	ć	ccircumflex	1084	49	0	u0109
206	ć	cacute	1084	49	0	u0107
207	č	ccaron	1084	49	0	u010D
208	ć	cdotaccent	1084	49	0	u010B
209	ê	ecircumflex	1146	50	0	u00EA
210	é	eacute	1146	50	0	u00E9
211	è	egrave	1146	50	0	u00E8
212	ë	edieresis	1146	50	0	u00EB
213	ë	emacron	1146	50	0	u0113
214	ě	ecaron	1146	50	0	u011B

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
215	é	edotaccent	1146	50	0	u0117
216	â	gcircumflex	1132	50	0	u011D
217	ã	gdotaccent	1132	50	0	u0121
218	â	hcircumflex	1070	100	0	u0125
219	í	dotlessi	313	75	0	u0131
220	î	icircumflex	568	0	0	u00EE
221	ì	igrave	568	-100	0	u00EC
222	í	iacute	392	50	0	u00ED
223	ĩ	itilde	875	-101	0	u0129
224	ï	idieresis	313	-51	0	u00EF
225	í	imacron	313	-108	0	u012B
226	ń	nacute	1120	100	0	u0144
227	ñ	ntilde	1120	22	0	u00F1
228	њ	ncaron	1120	100	0	u0148
229	ò	ograve	1150	50	0	u00F2
230	ó	oacute	1150	50	0	u00F3
231	ô	ocircumflex	1150	50	0	u00F4
232	õ	otilde	1150	36	0	u00F5
233	ö	odieresis	1150	50	0	u00F6
234	ö	omacron	1150	50	0	u014D
235	ø	oslash	1308	100	0	u00F8
236	њ	uni01D2	1150	50	0	u01D2
237	œ	oe	2028	50	0	u0153
238	ŕ	rcaron	764	100	0	u0159
239	ŕ	racute	764	100	0	u0155
240	ś	sacute	956	50	0	u015B
241	š	scircumflex	956	50	0	u015D
242	š	scaron	956	50	0	u0161
243	ş	scedilla	956	50	0	u015F
244	ù	ugrave	1120	100	0	u00F9
245	ú	uacute	1120	100	0	u00FA
246	û	ucircumflex	1120	100	0	u00FB
247	ü	udieresis	1120	100	0	u00FC
248	ũ	utilde	1120	22	0	u0169
249	ú	umacron	1120	100	0	u016B
250	ő	uring	1120	100	0	u016F
251	ű	uni01D4	1120	100	0	u01D4
252	ŵ	wcircumflex	1601	25	0	u0175
253	ý	yacute	1120	100	0	u00FD
254	ÿ	ydieresis	1120	100	0	u00FF
255	ŷ	ycircumflex	1120	100	0	u0177
256	ž	zcaron	1009	25	0	u017E
257	܂	zacute	1009	25	0	u017A

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
258	ż	zdotaccent	1009	25	0	u017C
259	þ	thorn	1134	100	0	u00FE
260	Þ	Thorn	1272	100	0	u00DE
261	Ծ	germandbls	1139	50	0	u00DF
262	ð	eth	1210	80	0	u00F0
263	Đ	Eth	1550	80	0	u00D0
264	՚	ZWNJ	321	66	1	u200C
265	՚	ZWJ	321	-90	1	u200D
266	₹	rupee	1196	100	1	u20B9
267	€	euro	1336	80	0	u20AC
268	£	pound	1235	50	0	u00A3
269	¥	yen	1064	50	0	u00A5
270	ଓ	uni25CC	1084	30	1	u25CC
271	߱	mlchandrabindu	131	-420	0	u0D01
272	ঊ	anuswara	823	60	1	u0D02
273	ঋ	visarga	581	60	1	u0D03
274	ঔ	anuswaraabove	0	-166	1	u0D00
275	ঁ	verticalbarvirama	352	95	1	u0D3B
276	ঁ	circularvirama	318	-106	1	u0D3C
277	ଙ୍ଗ	ml_a	2456	80	1	u0D05
278	ଙ୍ଗୁ	ml_aa	2782	80	1	u0D06
279	ଙ୍ଗୀ	ml_i	1808	80	1	u0D07
280	ଙ୍ଗୀୟ	ml_ii	3095	80	1	u0D08
281	ଙ୍ଗୀୢ	ml_u	1278	80	1	u0D09
282	ଉଁ	ml_uu	2545	80	1	u0D0A
283	ଓଁ	ml_r	1517	80	1	u0D0B
284	ଓଁୟ	ml_rr	1517	80	1	u0D60
285	ଓଁୟୀ	ml_l	2042	80	1	u0D0C
286	ଓଁୟୀୢ	ml_ll	2368	80	1	u0D61
287	ଓଁୟେ	ml_e	2116	80	1	u0D0E
288	ଓଁୟେୟ	ml_ee	2164	80	1	u0D0F
289	ଓଁୟେୟୀ	ml_ai	3346	80	1	u0D10
290	ଓଁୟେୟୀ୦	ml_o	1361	80	1	u0D12
291	ଓଁୟେୟୀ୦୦	ml_oo	2194	80	1	u0D13
292	ଓଁୟେୟୀ୦୧	ml_au	2578	80	1	u0D14
293	କ	k1	1887	80	1	u0D15
294	କୁ	k2	1700	80	1	u0D16
295	କୁୟ	k3	1643	80	1	u0D17
296	କୁୟୀ	k4	2335	80	1	u0D18
297	ବୁ	ng	1918	80	1	u0D19
298	ଚୁ	ch1	1597	20	1	u0D1A
299	ଚୁୟ	ch2	2332	20	1	u0D1B
300	ଚୁୟୀ	ch3	1668	80	1	u0D1C

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
301	ଠୀ	ch4	2925	80	1	u0D1D
302	ନ୍ଜ	nj	2461	80	1	u0D1E
303	ତୀ	t1	1151	80	1	u0D1F
304	ତୁ	t2	1261	80	1	u0D20
305	ତୃ	t3	2259	80	1	u0D21
306	ତ୍ୟ	t4	2387	80	1	u0D22
307	ନ୍ହ	nh	2467	80	1	u0D23
308	ଥୀ	th1	1705	80	1	u0D24
309	ଥୁ	th2	1528	100	1	u0D25
310	ଥୃ	th3	1179	80	1	u0D26
311	ଥ୍ୟ	th4	1752	80	1	u0D27
312	ନୀ	n1	1752	80	1	u0D28
313	ନୂ	n2	1879	80	1	u0D29
314	ପୀ	p1	1564	80	1	u0D2A
315	ପୂ	p2	1939	80	1	u0D2B
316	ପୃ	p3	2305	80	1	u0D2C
317	ପ୍ୟ	p4	1219	79	1	u0D2D
318	ମୀ	m1	1213	100	1	u0D2E
319	ଯୀ	y1	1790	80	1	u0D2F
320	ରୀ	r3	1347	80	1	u0D30
321	ରୁ	rh	1252	80	1	u0D31
322	ଲୀ	l3	1457	100	1	u0D32
323	ଲୁ	lh	1327	79	1	u0D33
324	ଝୁ	zh	1202	80	1	u0D34
325	ବୀ	v1	1692	80	1	u0D35
326	ଶୀ	z1	1878	80	1	u0D36
327	ଷୀ	sh	1897	80	1	u0D37
328	ସୀ	s1	2259	80	1	u0D38
329	ହୀ	h1	2065	80	1	u0D39
330	ୟ	avagraha	1399	20	1	u0D3D
331	ାୟ	a2	890	60	1	u0D3E
332	ିୟ	i1	360	-271	1	u0D3F
333	ିୟ	i2	353	-390	1	u0D40
334	ୁୟ	u1	600	0	1	u0D41
335	ୁୟ	u2	802	0	1	u0D42
336	ୱୟ	r1	769	30	1	u0D43
337	ୱୟ	r2	650	30	1	u0D44
338	ିୟ	l1	79	-1275	1	u0D62
339	ିୟ	l2	150	-1550	0	u0D63
340	ୱୟ	e1	1294	80	1	u0D46
341	ୱୟ	e2	981	80	1	u0D47
342	ାୟ	ai1	2575	80	1	u0D48
343	ାୟ	o1	2606	80	1	u0D4A

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
344	ଓ	o2	2175	80	1	u0D4B
345	ଓ	uni0D4C	2970	80	1	u0D4C
346	্	xx	62	-420	3	u0D4D
347	্	dotrepb	32	50	3	u0D4E
348	া	au2	1303	60	1	u0D57
349	ং	datemark	2136	80	1	u0D79
350	ৰ	rh_half	1216	80	1	u0D3A
351	০	ml_0	1093	100	0	u0D66
352	১	ml_1	1468	80	0	u0D67
353	২	ml_2	1543	80	0	u0D68
354	৩	ml_3	2012	80	0	u0D69
355	৪	ml_4	1342	80	0	u0D6A
356	৫	ml_5	1913	80	0	u0D6B
357	৬	ml_6	2379	80	0	u0D6C
358	৭	ml_7	1420	80	0	u0D6D
359	৮	ml_8	1693	80	0	u0D6E
360	৯	ml_9	1852	80	0	u0D6F
361	ঃ	mlpara	2258	80	0	u0D4F
362	ঃ	arakaani	2379	80	0	u0D58
363	ঃ	aramaa	1912	80	0	u0D59
364	ঃ	muunnukaani	2063	80	0	u0D5A
365	ৠ	orumaa	1692	120	0	u0D5B
366	ঠ	ml_ii_archaic	2544	80	0	u0D5F
367	৳	kaal	1406	100	0	u0D73
368	৳	ara	1621	80	0	u0D74
369	৳	mukkaal	2000	80	0	u0D75
370	৳	ml_10	1876	79	0	u0D70
371	৳	ml_100	1792	80	0	u0D71
372	৳	ml_1000	2495	80	0	u0D72
373	৳	rantumaa	2815	80	0	u0D5C
374	৳	muunnumaa	3852	79	0	u0D5D
375	৳	naalumaa	2536	80	0	u0D5E
376	৳	maakaani	2395	80	0	u0D76
377	৳	arakkaal	3037	80	0	u0D77
378	৳	muntaani	4109	79	0	u0D78
379	ঁ	k1cil	1887	80	2	u0D7F
380	ঁ	nhcil	2587	80	1	u0D7A
381	ঁ	n1cil	1872	80	1	u0D7B
382	ঁ	l3cil	2063	80	2	u0D7D
383	ঁ	lhcil	1865	80	2	u0D7E
384	ঁ	r3cil	1356	80	2	u0D7C
385	ঁ	y1cil	1953	79	0	u0D55
386	ঁ	m1cil	1213	100	0	u0D54

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
387	ঘ	zhcil	1202	80	0	u0D56
388	ର୍	r4	598	100	1	
389	ୟ	y2	509	-100	1	
390	ୟୁ	y2u1	539	-100	1	
391	ୟୁ	y2u2	574	-100	2	
392	ୱ	v2	361	-300	2	
393	କ୍ଷ	k1u1	1888	80	2	
394	କ୍ଷ	k1u2	1889	80	2	
395	କ୍ଷ	k1r1	1902	80	2	
396	କ୍ଷ	k1r2	1902	80	0	
397	କ୍ଷ	k1l1	1887	80	2	
398	କ୍ଷ	k1k1	2367	80	2	
399	କ୍ଷ	k1k1u1	2383	80	2	
400	କ୍ଷ	k1k1u2	2384	80	2	
401	କ୍ଷ	k1k1r1	2378	80	2	
402	କ୍ଷ	k1k1r3	2746	80	2	
403	କ୍ଷ	k1k1r3u1	2746	80	2	
404	କ୍ଷ	k1k1r3u2	2790	80	2	
405	କ୍ଷ	k1t1	1887	80	0	
406	କ୍ଷ	k1t1u1	1887	80	0	
407	କ୍ଷ	k1t1u2	1887	80	0	
408	କ୍ଷ	k1t1r3	1887	80	0	
409	କ୍ଷ	k1t1r3u1	1887	80	0	
410	କ୍ଷ	k1t1r3u2	1887	80	0	
411	କ୍ଷ	k1nh	1887	80	2	
412	କ୍ଷ	k1nhu1	1887	80	2	
413	କ୍ଷ	k1nhu2	1985	80	2	
414	କ୍ଷ	k1th1	3190	79	2	
415	କ୍ଷ	k1th1u1	3205	80	2	
416	କ୍ଷ	k1th1u2	3283	80	2	
417	କ୍ଷ	k1th1r1	3238	80	2	
418	କ୍ଷ	k1th1r2	3238	80	0	
419	କ୍ଷ	k1th1r3	3563	80	2	
420	କ୍ଷ	k1th1r3u1	3624	80	0	
421	କ୍ଷ	k1th1r3u2	3637	80	0	
422	କ୍ଷ	k1n1	1887	80	0	
423	କ୍ଷ	k1n1u1	1887	80	0	
424	କ୍ଷ	k1n1u2	1887	80	0	
425	କ୍ଷ	k1m1	1887	80	0	
426	କ୍ଷ	k1m1u1	1887	80	0	
427	କ୍ଷ	k1m1u2	1887	80	0	
428	କ୍ଷ	k1r3	2235	80	2	
429	କ୍ଷ	k1r3u1	2288	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
430	କୁ	k1r3u2	2438	80	2	
431	କୁ	k1l3	1887	80	2	
432	କୁ	k1l3u1	1887	80	2	
433	କୁ	k1l3u2	1942	80	2	
434	କୁ	k1sh	2898	80	2	
435	କୁ	k1shu1	2918	80	2	
436	କୁ	k1shu2	2918	80	2	
437	କୁ	k1shr1	2898	80	0	
438	କୁ	k1shnh	2918	80	0	
439	କୁ	k1shnhu1	2918	80	0	
440	କୁ	k1shnhu2	2918	80	0	
441	କୁ	k1shm1	2898	80	0	
442	କୁ	k1shm1u1	2898	80	0	
443	କୁ	k1shm1u2	2898	80	0	
444	କୁ	k1s1	1887	80	2	
445	କୁ	k1s1u1	1887	80	0	
446	କୁ	k1s1u2	1887	80	0	
447	କୁ	k1s1r1	1887	80	0	
448	କୁ	k1s1r3	1887	80	0	
449	କୁ	k1s1r3u1	1887	80	0	
450	କୁ	k1s1r3u2	1889	80	0	
451	କୁ	k1rhrh	1887	80	0	
452	କୁ	k1rhrhu1	1887	80	0	
453	କୁ	k1rhrhu2	1887	80	0	
454	କୁ	k1rhrhr3	1887	80	0	
455	କୁ	k1rhrhr3u1	1887	80	0	
456	କୁ	k1rhrhr3u2	1887	80	0	
457	କୁ	k2u1	1700	80	2	
458	କୁ	k2u2	1700	80	2	
459	କୁ	k2r1	1700	80	2	
460	କୁ	k2r3	2033	80	0	
461	କୁ	k2r3u1	2033	80	0	
462	କୁ	k2r3u2	2033	80	0	
463	କୁ	k3u1	1670	80	2	
464	କୁ	k3u2	1724	80	2	
465	କୁ	k3k4	2993	80	0	
466	କୁ	k3k4u1	2993	80	0	
467	କୁ	k3k4u2	2993	80	0	
468	କୁ	k3r1	1675	79	2	
469	କୁ	k3r2	1675	79	0	
470	କୁ	k3k3	1643	80	2	
471	କୁ	k3k3u1	1643	80	2	
472	କୁ	k3k3u2	1643	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
473	ঢ	k3k3r1	1643	80	2	
474	ঢ	k3k3r3	1643	80	0	
475	ঢ	k3k3r3u1	1643	80	0	
476	ঢ	k3k3r3u2	1620	80	0	
477	ঢ	k3th3	1705	80	2	
478	ঢ	k3th3u1	1705	80	2	
479	ঢ	k3th3u2	1705	80	2	
480	ঢ	k3th3r1	1788	80	2	
481	ঢু	k3th3th4	2828	80	2	
482	ঢু	k3th3th4u1	2828	80	2	
483	ঢু	k3th3th4u2	2800	80	2	
484	ঢু	k3th3th4r1	2843	80	0	
485	ঢু	k3th3th4r3	3193	80	0	
486	ঢু	k3th3th4r3u1	3193	80	0	
487	ঢু	k3th3th4r3u2	3221	80	0	
488	ঢ	k3n1	2284	80	2	
489	ঢ	k3n1u1	2422	56	2	
490	ঢ	k3n1u2	2772	80	2	
491	ঢ	k3m1	1912	80	2	
492	ঢ	k3m1u1	1912	80	2	
493	ঢ	k3m1u2	1932	80	2	
494	ঢ	k3r3	2048	80	2	
495	ঢ	k3r3u1	2048	80	2	
496	ঢ	k3r3u2	2088	80	2	
497	ঢ	k3l3	1643	80	2	
498	ঢ	k3l3u1	1643	80	2	
499	ঢ	k3l3u2	1670	80	2	
500	ঢু	k4u1	2335	80	2	
501	ঢু	k4u2	2335	80	2	
502	ঢু	k4r1	2335	80	2	
503	ঢু	k4r2	2335	80	0	
504	ঢু	k4n1	2335	80	0	
505	ঢু	k4n1u1	2335	80	0	
506	ঢু	k4n1u2	2355	80	0	
507	ঢু	k4r3	2719	80	2	
508	ঢু	k4r3u1	2719	80	2	
509	ঢু	k4r3u2	2720	80	2	
510	ঢ	ngu1	1918	80	2	
511	ঢ	ngu2	1934	80	2	
512	ঢ	ngk1	1887	80	2	
513	ঢ	ngk1u1	1888	80	2	
514	ঢ	ngk1u2	1889	80	2	
515	ঢ	ngk1r1	1902	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
516	ঙ	ngk1r2	1902	80	0	
517	ঙ	ngk1r3	2312	80	0	
518	ঙ	ngk1r3u1	2352	80	0	
519	ঙ	ngk1r3u2	2352	80	0	
520	ঙঙ	ngng	2704	79	2	
521	ঙঙ	ngngu1	2703	79	2	
522	ঙঙ	ngngu2	2703	79	2	
523	ঁ	ch1u1	1597	20	2	
524	ঁ	ch1u2	1549	20	2	
525	ঁ	ch1ch1	1597	20	2	
526	ঁ	ch1ch1u1	1597	20	2	
527	ঁ	ch1ch1u2	1597	20	2	
528	ঁ	ch1ch2	1597	20	2	
529	ঁ	ch1ch2u1	1595	20	0	
530	ঁ	ch1ch2u2	1651	20	0	
531	ঁ	ch1ch2r1	1631	20	0	
532	ঁ	ch1ch2r3	1663	0	0	
533	ঁ	ch1ch2r3u1	1716	0	0	
534	ঁ	ch1ch2r3u2	1695	0	0	
535	ঁ	ch2u1	2647	20	2	
536	ঁ	ch2u2	2765	20	2	
537	ঁ	ch2r1	2659	20	2	
538	ঁ	ch2r3	3141	80	0	
539	ঁ	ch2r3u1	3181	80	0	
540	ঁ	ch2r3u2	3181	80	0	
541	ঁ	ch3u1	1938	80	2	
542	ঁ	ch3u2	2046	80	2	
543	ঁ	ch3r1	1987	81	2	
544	ঁ	ch3r2	1988	80	0	
545	ঁ	ch3ch3	3268	80	2	
546	ঁ	ch3ch3u1	3539	80	2	
547	ঁ	ch3ch3u2	3646	80	2	
548	ঁ	ch3ch3r1	3587	80	2	
549	ঁ	ch3nj	4014	80	2	
550	ঁ	ch3r3	2385	80	2	
551	ঁ	ch3r3u1	2466	80	2	
552	ঁ	ch3r3u2	2567	80	2	
553	ঁ	ch4u1	2926	80	2	
554	ঁ	ch4u2	2925	80	2	
555	ঁ	ch4r1	2940	80	0	
556	ঁ	ch4r2	2940	80	0	
557	ঁ	ch4r3	3278	80	0	
558	ঁ	ch4r3u1	3318	80	0	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
559	ച്ച	ch4r3u2	3298	80	0	
560	ഞ	nju1	2462	80	2	
561	ഞ	nju2	2462	80	2	
562	ഞ	njch1	2742	80	2	
563	ഞ	njch1u1	2743	80	2	
564	ഞ	njch1u2	2743	80	2	
565	ഞ	njch1r1	2743	80	2	
566	ഞര	njch2	3608	80	0	
567	ഞര	njch2u1	3923	80	0	
568	ഞര	njch2u2	4040	80	0	
569	ഞര	njch2r1	3935	80	0	
570	ഞ	njch3	2907	80	2	
571	ഞ	njch3u1	3176	80	2	
572	ഞ	njch3u2	3283	80	2	
573	ഞത	njnj	3673	80	2	
574	ഞത	njnju1	3674	80	2	
575	ഞത	njnju2	3674	80	2	
576	ം	t1u1	1151	80	2	
577	ം	t1u2	1200	80	2	
578	ം	t1r1	1148	80	2	
579	ം	t1r2	1147	79	0	
580	ം	t1t1	1136	80	2	
581	ം	t1t1u1	1177	80	2	
582	ം	t1t1u2	1270	80	2	
583	ം	t1r3	1456	80	2	
584	ം	t1r3u1	1456	80	2	
585	ം	t1r3u2	1500	80	2	
586	ം	t2u1	1261	80	2	
587	ം	t2u2	1292	80	2	
588	ം	t3u1	2259	78	2	
589	ം	t3u2	2300	80	2	
590	ം	t3r1	2273	80	2	
591	ം	t3t3	2259	78	2	
592	ം	t3t3u1	2259	78	2	
593	ം	t3t3u2	2259	78	2	
594	ം	t3t4	2259	78	2	
595	ം	t3t4u1	2259	78	2	
596	ം	t3t4u2	2259	78	2	
597	ം	t3r3	2620	80	2	
598	ം	t3r3u1	2653	80	2	
599	ം	t3r3u2	2693	80	2	
600	ം	t4u1	2387	80	2	
601	ം	t4u2	2400	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
602	ୟ	t4r1	2400	80	2	
603	ୟ	t4r3	2748	80	0	
604	ୟ	t4r3u1	2748	80	0	
605	ୟ	t4r3u2	2751	80	0	
606	ନ୍ତୁ	nhu1	2628	80	2	
607	ନ୍ତୁ	nhu2	2954	80	2	
608	ନ୍ତୁ	nht1	2592	80	2	
609	ନ୍ତୁ	nht1u1	2592	80	2	
610	ନ୍ତୁ	nht1u2	2614	80	2	
611	ନ୍ତୁ	nht1r3	2979	80	2	
612	ନ୍ତୁ	nht1r3u1	2992	80	0	
613	ନ୍ତୁ	nht1r3u2	3072	80	0	
614	ନ୍ତୁ	nht2	2466	80	2	
615	ନ୍ତୁ	nht2u1	2466	80	0	
616	ନ୍ତୁ	nht2u2	2531	80	0	
617	ନ୍ତୁ	nht3	3662	80	2	
618	ନ୍ତୁ	nht3u1	3662	80	2	
619	ନ୍ତୁ	nht3u2	3663	80	2	
620	ନ୍ତୁ	nht3r1	3677	80	0	
621	ନ୍ତୁ	nht3r3	4015	79	0	
622	ନ୍ତୁ	nht3r3u1	4015	79	0	
623	ନ୍ତୁ	nht3r3u2	4016	79	0	
624	ନ୍ତୁ	nht4	3789	79	0	
625	ନ୍ତୁ	nht4r1	3803	79	0	
626	ନ୍ତୁ	nhnh	2466	80	2	
627	ନ୍ତୁ	nhnhu1	2466	80	2	
628	ନ୍ତୁ	nhnhu2	2481	80	2	
629	ନ୍ତୁ	nhm1	2622	80	2	
630	ନ୍ତୁ	nhm1u1	2623	80	2	
631	ନ୍ତୁ	nhm1u2	2623	80	2	
632	ତୁ	th1u1	1721	80	2	
633	ତୁ	th1u2	1799	80	2	
634	ତୁ	th1r1	1753	80	2	
635	ତୁ	th1r2	1753	80	0	
636	ତୁ	th1th1	2915	80	2	
637	ତୁ	th1th1u1	2930	79	2	
638	ତୁ	th1th1u2	3009	80	2	
639	ତୁ	th1th1r1	2963	80	2	
640	ତୁ	th1th1r2	2963	80	0	
641	ତୁ	th1th1r3	3283	79	2	
642	ତୁ	th1th1r3u1	3283	79	2	
643	ତୁ	th1th1r3u2	3380	79	2	
644	ତୁ	th1th2	2758	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
645	თ	th1th2u1	2778	80	2	
646	თ	th1th2u2	2778	80	2	
647	თ	th1th2r1	2758	80	2	
648	თ	th1n1	2333	80	2	
649	თ	th1p4	2459	80	2	
650	თ	th1p4u1	2493	80	2	
651	თ	th1p4u2	2818	79	2	
652	თ	th1p4r1	2515	80	0	
653	თ	th1m1	2489	80	2	
654	თ	th1m1u1	2509	80	2	
655	თ	th1m1u2	2490	80	2	
656	თ	th1m1r1	2489	80	2	
657	თ	th1r3	2093	80	2	
658	თ	th1r3u1	2094	80	2	
659	თ	th1r3u2	2094	80	2	
660	თ	th1l3	1705	80	2	
661	თ	th1l3u1	1725	80	2	
662	თ	th1l3u2	1750	80	2	
663	თ	th1s1	2841	80	2	
664	თ	th1s1u1	2841	80	2	
665	თ	th1s1u2	2841	80	2	
666	თ	th1s1r1	2854	80	2	
667	თ	th1s1r2	2854	80	0	
668	თ	th1s1n1	2881	80	0	
669	თ	th1s1n1u1	2881	80	0	
670	თ	th1s1n1u2	2995	80	0	
671	თ	th1s1m1	2841	80	0	
672	თ	th1s1m1u1	2841	80	0	
673	თ	th1s1m1u2	2841	80	0	
674	თ	th1s1r3	3195	80	0	
675	თ	th1s1r3u1	3235	80	0	
676	თ	th1s1r3u2	3235	80	0	
677	ც	th2u1	1528	100	2	
678	ც	th2u2	1528	100	2	
679	ც	th2r3	2033	80	0	
680	ც	th2r3u1	2053	80	0	
681	ც	th2r3u2	2053	80	0	
682	ც	th3u1	1179	80	2	
683	ც	th3u2	1200	80	2	
684	ც	th3r1	1262	80	2	
685	ც	th3r2	1262	80	0	
686	ც	th3th3	1180	79	2	
687	ც	th3th3u1	1235	79	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
688	ቃ	th3th3u2	1312	79	2	
689	ቄ	th3th4	2302	80	2	
690	ቅ	th3th4u1	2302	80	2	
691	ቆ	th3th4u2	2302	80	2	
692	ቈ	th3th4r1	2318	80	0	
693	቉	th3th4r2	2318	80	0	
694	ቊ	th3th4r3	2636	80	0	
695	ቋ	th3th4r3u1	2636	80	0	
696	ቌ	th3th4r3u2	2649	80	0	
697	ቍ	th3r3	1590	80	2	
698	቎	th3r3u1	1635	80	2	
699	቏	th3r3u2	1765	80	2	
700	ቈ	th4u1	1752	80	2	
701	቉	th4u2	1763	80	2	
702	ቊ	th4r1	1767	80	2	
703	ቋ	th4r2	1767	80	0	
704	ቌ	th4r3	2134	80	2	
705	ቍ	th4r3u1	2143	80	2	
706	቏	th4r3u2	2219	80	2	
707	አ	n1u1	1915	80	2	
708	ኡ	n1u2	2241	80	2	
709	ኢ	n1r1	1797	80	2	
710	ኣ	n1r2	1797	80	0	
711	ኤ	n1th1	2333	80	2	
712	እ	n1th1u1	2350	80	2	
713	ኦ	n1th1u2	2427	80	2	
714	ኧ	n1th1r1	2386	80	2	
715	ከ	n1th1r2	2386	80	0	
716	ኩ	n1th1r3	2716	80	2	
717	ኪ	n1th1r3u1	2716	80	2	
718	ካ	n1th1r3u2	2715	80	2	
719	ኬ	n1th2	2805	80	2	
720	ክ	n1th2u1	2825	80	2	
721	ኮ	n1th2u2	2806	80	2	
722	ኯ	n1th2r1	2805	80	2	
723	ኰ	n1th3	1790	80	2	
724	኱	n1th3u1	1790	80	2	
725	ኲ	n1th3u2	1794	80	2	
726	ኳ	n1th3r1	1860	80	2	
727	ኴ	n1th3r2	1860	80	0	
728	ኵ	n1th3r3	2198	80	2	
729	኶	n1th3r3u1	2258	80	2	
730	኷	n1th3r3u2	2277	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
731	ນ້ວ	n1th4	2927	80	2	
732	ນ້ງ	n1th4u1	2927	80	2	
733	ນ້ຳ	n1th4u2	2960	80	2	
734	ນ້ຍ	n1th4r3	3296	80	2	
735	ນູ້	n1th4r3u1	3296	80	2	
736	ນ້ົ	n1th4r3u2	3296	80	2	
737	ນ້ມ	n1n1	2338	80	2	
738	ນ້າ	n1n1u1	2500	80	2	
739	ນ້ອ	n1n1u2	2827	80	2	
740	ນ້ອງ	n1n1r1	2383	80	2	
741	ນ້ອງ	n1n1r2	2379	78	0	
742	ນ້ອງ	n1n1r3	2730	80	2	
743	ນ້ອງ	n1n1r3u1	2730	80	2	
744	ນ້ອງ	n1n1r3u2	2754	81	2	
745	ນ້ມ	n1m1	1908	80	2	
746	ນ້ອ	n1m1u1	1908	80	2	
747	ນ້ອ	n1m1u2	1908	80	2	
748	ນ້ອ	n1m1r1	1908	80	2	
749	ນ້ອ	n1m1r3	2266	80	0	
750	ນ້ອ	n1m1r3u1	2266	80	0	
751	ນ້ອ	n1m1r3u2	2266	80	0	
752	ນ້ອ	n1r3	2138	80	0	
753	ນ້ອ	n1r3u1	2138	80	0	
754	ນ້ອ	n1r3u2	2185	80	0	
755	ນ້ຮ	n1rh	1872	80	2	
756	ນ້ຮ	n1rhu1	1872	80	2	
757	ນ້ຮ	n1rhu2	1872	80	2	
758	ນ້ຳ	p1u1	1564	80	2	
759	ນ້ຳ	p1u2	1564	80	2	
760	ນ້ຳ	p1r1	1564	80	2	
761	ນ້ຳ	p1th1	1564	80	2	
762	ນ້ຳ	p1n1	1564	80	2	
763	ນ້ຳ	p1n1u1	1564	80	2	
764	ນ້ຳ	p1n1u2	1564	80	2	
765	ນ້ຳ	p1p1	1564	80	2	
766	ນ້ຳ	p1p1u1	1564	80	2	
767	ນ້ຳ	p1p1u2	1564	80	2	
768	ນ້ຳ	p1p1r1	1564	80	2	
769	ນ້ຳ	p1p2	1564	80	2	
770	ນ້ຳ	p1r3	1930	80	2	
771	ນ້ຳ	p1r3u1	1949	80	2	
772	ນ້ຳ	p1r3u2	2049	80	2	
773	ນ້ຳ	p1l3	1581	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
774	፩	p1l3u1	1601	80	2	
775	፪	p1l3u2	1720	80	2	
776	፫	p1s1	1564	80	2	
777	፬	p2u1	1939	80	2	
778	፭	p2u2	1939	80	2	
779	፮	p3th3	2305	80	2	
780	፯	p2r3	2302	80	2	
781	፰	p2r3u1	2322	80	2	
782	፱	p2r3u2	2398	80	2	
783	፲	p2l3	1939	80	2	
784	፳	p2l3u1	1949	80	2	
785	፴	p2l3u2	2012	80	2	
786	፵	p3u1	2305	80	2	
787	፶	p3u2	2305	80	2	
788	፷	p3r1	2305	79	2	
789	፸	p3p3	2305	80	2	
790	፹	p3p3u1	2316	80	2	
791	፺	p3p3u2	2306	80	2	
792	፻	p3r3	2658	79	2	
793	፼	p3r3u1	2678	79	2	
794	፽	p3r3u2	2740	79	2	
795	፾	p3l3	2305	80	2	
796	፿	p3l3u1	2325	80	2	
797	፻	p3l3u2	2451	80	2	
798	፻	p4u1	1254	80	2	
799	፻	p4u2	1589	80	2	
800	፻	p4r1	1275	79	2	
801	፻	p4r2	1275	79	0	
802	፻	p4r3	1622	80	2	
803	፻	p4r3u1	1622	80	2	
804	፻	p4r3u2	1622	80	2	
805	፻	m1u1	1213	100	2	
806	፻	m1u2	1213	100	2	
807	፻	m1r1	1213	100	2	
808	፻	m1r2	1213	100	0	
809	፻	m1p1	2176	80	2	
810	፻	m1p1u1	2176	80	2	
811	፻	m1p1u2	2176	80	2	
812	፻	m1p1r1	2176	80	2	
813	፻	m1p1r3	2542	80	2	
814	፻	m1p1r3u1	2560	80	2	
815	፻	m1p1r3u2	2543	80	2	
816	፻	m1m1	2062	100	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
817	ਮੁ	m1m1u1	2062	100	2	
818	ਮੁ	m1m1u2	2062	100	2	
819	ਮੁ	m1r3	1611	80	2	
820	ਮੁ	m1r3u1	1650	80	2	
821	ਮੁ	m1r3u2	1699	80	2	
822	ਮੁ	m1l3	1291	100	2	
823	ਮੁ	m1l3u1	1291	100	0	
824	ਮੁ	m1l3u2	1290	100	0	
825	ਯੁ	y1u1	1790	80	2	
826	ਯੁ	y1u2	1810	80	2	
827	ਯੁ	y1r1	1808	80	0	
828	ਯੁ	y1k1	1790	80	2	
829	ਯੁ	y1k1u1	1790	80	0	
830	ਯੁ	y1k1u2	1790	80	0	
831	ਯੁ	y1k1k1	1790	80	2	
832	ਯੁ	y1k1k1u1	1790	80	2	
833	ਯੁ	y1k1k1u2	1790	80	0	
834	ਯੁ	y1th1	1790	80	2	
835	ਯੁ	y1y1	1790	80	2	
836	ਯੁ	y1y1u1	1790	80	2	
837	ਯੁ	y1y1u2	1790	80	2	
838	ਰੂ	r3u1	1780	80	2	
839	ਰੂ	r3u2	2168	80	2	
840	ਰੂ	r3r1	1674	79	0	
841	ਿ	ਿ3u1	1457	100	2	
842	ਿ	ਿ3u2	1457	100	2	
843	ਿ	ਿ3k1	1457	100	0	
844	ਿ	ਿ3k1u1	1457	100	0	
845	ਿ	ਿ3k1u2	1457	100	0	
846	ਿ	ਿ3k1r1	1457	100	0	
847	ਿ	ਿ3k1r3	1457	100	0	
848	ਿ	ਿ3k1r3u1	1457	100	0	
849	ਿ	ਿ3k1r3u2	1457	100	0	
850	ਿ	ਿ3p1	1457	100	2	
851	ਿ	ਿ3p1u1	1457	100	2	
852	ਿ	ਿ3p1u2	1457	100	2	
853	ਿ	ਿ3l3	1471	100	2	
854	ਿ	ਿ3l3u1	1471	100	2	
855	ਿ	ਿ3l3u2	1471	100	2	
856	ਿ	v1u1	1692	80	2	
857	ਿ	v1u2	1692	80	2	
858	ਿ	v1r1	1692	80	2	
859	ਿ	v1r3	2033	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
860	၁၃	v1r3u1	2033	80	2	
861	၁၃	v1r3u2	2159	80	2	
862	၁၄	v1l3	1692	80	2	
863	၁၄	v1l3u1	1715	80	2	
864	၁၄	v1l3u2	1805	80	2	
865	၁၅	v1v1	1692	80	2	
866	၁၆	v1v1u1	1692	80	2	
867	၁၆	v1v1u2	1692	80	2	
868	၁၇	z1u1	2194	80	2	
869	၁၈	z1u2	2310	80	2	
870	၁၉	z1r1	2205	80	2	
871	၁၉	z1ch1	2624	80	2	
872	၁၉	z1ch1u1	2624	80	2	
873	၁၉	z1ch1u2	2624	80	2	
874	၁၁၀	z1ch2	3489	80	0	
875	၁၁၀	z1ch2u1	3806	80	0	
876	၁၁၀	z1ch2u2	3922	80	0	
877	၁၁၀	z1ch2r1	3816	80	0	
878	၁၁၁	z1n1	1878	80	2	
879	၁၁၁	z1n1u1	1878	80	2	
880	၁၁၁	z1n1u2	1918	80	2	
881	၁၁၂	z1m1	1878	80	0	
882	၁၁၃	z1r3	2549	76	2	
883	၁၁၃	z1r3u1	2537	76	2	
884	၁၁၃	z1r3u2	2569	76	2	
885	၁၁၄	z1l3	1878	80	2	
886	၁၁၄	z1l3u1	1878	80	2	
887	၁၁၄	z1l3u2	1878	80	2	
888	၁၁၅	z1z1	1878	80	2	
889	၁၁၅	z1z1u1	1878	80	2	
890	၁၁၅	z1z1u2	1878	80	2	
891	၁၁၆	shu1	1897	80	2	
892	၁၁၆	shu2	1897	80	2	
893	၁၁၆	shr1	1897	80	2	
894	၁၁၇	shk1	1897	80	0	
895	၁၁၇	shk1u1	1897	80	0	
896	၁၁၇	shk1u2	1914	80	0	
897	၁၁၇	shk1r1	1897	80	0	
898	၁၁၇	shk1r3	1897	80	0	
899	၁၁၈	sht1	1897	80	2	
900	၁၁၈	sht1u1	1898	80	2	
901	၁၁၈	sht1u2	1898	80	2	
902	၁၁၈	sht1r3	1897	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
903	ሃ	sht2	1897	80	2	
904	ሃ	sht2u1	1957	80	2	
905	ሃ	sht2u2	2003	80	2	
906	ሃ	shnh	1897	80	2	
907	ሃ	shnhu1	1897	80	2	
908	ሃ	shnhu2	1897	80	2	
909	ሃ	sh1p1	1897	80	2	
910	ሃ	shm1	1897	80	0	
911	ሃ	shr3	2261	80	0	
912	ሃ	shr3u1	2261	80	0	
913	ሃ	shr3u2	2269	80	0	
914	ሃ	s1u1	2259	80	2	
915	ሃ	s1u2	2268	80	2	
916	ሃ	s1r1	2269	80	2	
917	ሃ	s1r2	2269	80	0	
918	ሃ	s1k1	2288	80	2	
919	ሃ	s1k1u1	2297	80	2	
920	ሃ	s1k1u2	2288	80	0	
921	ሃ	s1k1r1	2312	80	0	
922	ሃ	s1k1r3	2246	80	0	
923	ሃ	s1k1r3u1	2246	80	0	
924	ሃ	s1k1r3u2	2246	80	0	
925	ሃ	s1k1k1	2279	80	2	
926	ሃ	s1k1k1u1	2279	80	2	
927	ሃ	s1k1k1u2	2259	80	0	
928	ሃ	s1k1k1r1	2259	80	0	
929	ሃ	s1k1k1r3	2259	80	0	
930	ሃ	s1k1k1r3u1	2259	80	0	
931	ሃ	s1k1k1r3u2	2298	80	0	
932	ሃ	s1th1	2260	80	2	
933	ሃ	s1th1u1	2260	80	0	
934	ሃ	s1th1u2	2260	80	0	
935	ሃ	s1th1r1	2260	80	0	
936	ሃ	s1th1r3	2260	80	2	
937	ሃ	s1th2	3312	80	2	
938	ሃ	s1th2u1	3312	80	2	
939	ሃ	s1th2u2	3312	80	2	
940	ሃ	s1th2r1	3312	80	2	
941	ሃ	s1ln1	2279	80	2	
942	ሃ	s1p1	2259	80	2	
943	ሃ	s1p1u1	2259	80	0	
944	ሃ	s1p1u2	2259	80	0	
945	ሃ	s1m1	2259	80	0	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
946	ஸ	s1r3	2603	80	2	
947	ஸ	s1r3u1	2603	80	2	
948	ஸ	s1r3u2	2603	80	2	
949	ஸ	s1l3	2259	80	2	
950	ஸ	s1l3u1	2260	80	2	
951	ஸ	s1l3u2	2285	80	2	
952	ஸ	s1s1	2259	80	2	
953	ஸ	s1s1u1	2259	80	2	
954	ஸ	s1s1u2	2241	80	2	
955	ஸ	s1rhrh	2259	80	2	
956	ஸ	s1rhrhu1	2259	80	2	
957	ஸ	s1rhrhu2	2305	80	2	
958	ஸ	s1rhrhr3	2259	80	0	
959	ஸ	s1rhrhr3u1	2259	80	0	
960	ஸ	s1rhrhr3u2	2259	80	0	
961	ஹ	h1u1	2080	80	2	
962	ஹ	h1u2	2125	80	2	
963	ஹ	h1r1	2111	80	2	
964	ஹ	h1n1	2577	80	2	
965	ஹ	h1n1u1	2740	80	2	
966	ஹ	h1n1u2	3066	80	2	
967	ஹ	h1m1	2052	80	2	
968	ஹ	h1m1u1	2052	80	2	
969	ஹ	h1m1u2	2051	80	2	
970	ஹ	h1m1r1	2052	80	2	
971	ஹ	h1r3	2450	80	2	
972	ஹ	h1r3u1	2450	80	2	
973	ஹ	h1r3u2	2450	80	2	
974	ஹ	h1l3	2065	80	2	
975	ஹ	h1l3u1	2066	80	0	
976	ஹ	h1l3u2	2066	80	0	
977	ஐ	ihu1	1327	79	2	
978	ஐ	ihu2	1327	79	2	
979	ஐ	ihlh	2590	79	2	
980	ஐ	ihlu1	2590	79	2	
981	ஐ	ihlu2	2590	79	2	
982	ஐ	zhu1	1202	80	2	
983	ஐ	zhu2	1202	80	2	
984	ஐ	zhk1	1221	80	0	
985	ஐ	zhk1u1	1242	80	0	
986	ஐ	zhk1u2	1242	80	0	
987	ஐ	zhch1	1202	80	2	
988	ஐ	zhch1u1	1202	80	0	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
989	ଡ଼	zhch1u2	1202	80	0	
990	ଠ	rhu1	1252	80	2	
991	ଠ	rhu2	1312	80	2	
992	ଠ	rhrh	1252	80	2	
993	ଠ	rhrhu1	1252	80	2	
994	ଠ	rhrhu2	1292	80	2	
995	ଠ	rhrhr3	2844	80	2	
996	ଠ	rhrhr3u1	2845	80	0	
997	ଠ	rhrhr3u2	2864	80	0	
998	କ	k1xx	1950	80	2	
999	ବ	k2xx	1973	80	2	
1000	ଶ	k3xx	1931	80	2	
1001	ଅଁ	k4xx	2446	80	2	
1002	ଙଁ	ngxx	2073	80	2	
1003	ଚ	ch1xx	1601	20	2	
1004	ଚର	ch2xx	2469	20	2	
1005	ଜ	ch3xx	1613	80	2	
1006	ତ୍ୟ	ch4xx	3146	80	2	
1007	ନ୍ତ	njxx	2517	80	2	
1008	ଶ	t1xx	1130	80	2	
1009	ସ	t2xx	1201	80	2	
1010	ସ୍ତ	t3xx	2300	122	2	
1011	ସ୍ତ୍ର	t4xx	2596	68	2	
1012	ନ୍ତ୍ର	nhxx	2696	80	2	
1013	ତ୍ର	th1xx	1788	80	2	
1014	ତ୍ର୍ଯ	th2xx	1557	100	2	
1015	ତ୍ର୍ଯ୍ୟ	th3xx	1291	80	2	
1016	ତ୍ର୍ୟ	th4xx	1892	80	2	
1017	ନ୍ତ୍ର୍ୟ	n1xx	1942	80	2	
1018	ପ୍ର	p1xx	1781	80	2	
1019	ପ୍ର୍ଯ	p2xx	2251	80	2	
1020	ପ୍ର୍ୟ	p3xx	2608	80	2	
1021	ପ୍ର୍ୟ୍ୟ	p4xx	1387	79	2	
1022	ମ୍ର	m1xx	1442	100	2	
1023	ୟ	y1xx	1987	80	2	
1024	ର୍ଦ	r3xx	1420	80	2	
1025	ର୍ଦ୍ର	rhxx	1391	80	2	
1026	ଲ୍ର	l3xx	1767	100	2	
1027	ଲ୍ର୍ଯ	lhxx	1297	79	2	
1028	ଶ୍ର୍ୟ	zhxx	1224	80	2	
1029	ଵ୍ର୍ୟ	v1xx	1815	80	2	
1030	ଶ୍ର୍ୟ	z1xx	1923	80	2	
1031	ଶ୍ର୍ୟ୍ୟ	shxx	2026	80	2	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
1032	መ	s1xx	2534	80	2	
1033	አ	h1xx	2220	80	2	
1034	ለ	l4	40	-1377	2	
1035	።	u_sign_drop	580	30	1	
1036	፻	uu_sign_drop	720	10	1	
1037	፻	u_sign_drop_small	451	30	0	
1038	፻	uu_sign_drop_small	584	30	0	
1039	፻	va_sign	2048	350	1	
1040	፻	th2_half	1611	21	1	
1041	፻	vocalic_r_sign_drop	1007	-120	1	
1042	፻	vocalic_rr_sign_drop	1007	-120	0	
1043	፻	_k1	1061	0	0	
1044	፻	_k1u1	1070	0	0	
1045	፻	_k1u2	1078	0	0	
1046	፻	_k1r1	1070	-1	0	
1047	፻	_k1r3	1270	0	0	
1048	፻	_k3	915	0	0	
1049	፻	_k3u1	931	0	0	
1050	፻	_k3u2	965	0	0	
1051	፻	_k3r1	935	0	0	
1052	፻	_k3r3	1157	0	0	
1053	፻	_k1k1	1349	0	0	
1054	፻	_k1k1u1	1361	0	0	
1055	፻	_k1k1u2	1360	0	0	
1056	፻	_k1k1r1	1355	0	0	
1057	፻	_k1k1r3	1576	0	0	
1058	፻	_k2	937	-1	0	
1059	፻	_ch1	911	0	0	
1060	፻	_ch2	1376	0	0	
1061	፻	_ch2u1	1565	0	0	
1062	፻	_ch2u2	1631	0	0	
1063	፻	_ch2r1	1572	0	0	
1064	፻	_ch2r3	1643	0	0	
1065	፻	_ch3	930	0	0	
1066	፻	_ch3u1	1092	0	0	
1067	፻	_ch3u2	1155	0	0	
1068	፻	_ch3r1	1123	0	0	
1069	፻	_t1	620	0	0	
1070	፻	_t1r3	807	-1	0	
1071	፻	_t2	686	0	0	
1072	፻	_t3	1284	0	0	
1073	፻	_t4	1361	0	0	
1074	፻	_nh	1408	0	0	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
1075	𠂇	_nhu1	1506	0	0	
1076	𠂈	_nhu2	1701	0	0	
1077	𢃠	_th1	952	0	0	
1078	𢃡	_th1u1	962	0	0	
1079	𢃢	_th1u2	1008	0	0	
1080	𢃣	_th1r1	981	0	0	
1081	𢃤	_th1r2	981	0	0	
1082	𢃥	_th1th1	1678	0	0	
1083	𢃦	_th1th1u1	1687	0	0	
1084	𢃧	_th1th1u2	1734	0	0	
1085	𢃨	_th1r3	1189	0	0	
1086	𢃩	_th3	636	0	0	
1087	𢃪	_th3r1	686	0	0	
1088	𢃫	_th4	980	0	0	
1089	𢃬	_th4r1	989	0	0	
1090	𢃭	_th4r2	989	0	0	
1091	𢃮	_n1	980	0	0	
1092	𢃯	_n1u1	1078	0	0	
1093	𢃰	_n1r1	1007	0	0	
1094	𢃱	_n1r3	1212	-1	0	
1095	𢃲	_n1u2	1273	0	0	
1096	𢃳	_n1n1	1332	0	0	
1097	𢃴	_n1n1u1	1429	0	0	
1098	𢃵	_n1n1u2	1625	0	0	
1099	𢃶	_p1	856	0	0	
1100	𢃷	_p1_	856	0	0	
1101	𢃸	_p1r3	1075	0	0	
1102	𢃹	_p2	1072	0	0	
1103	𢃺	_p3	1300	0	0	
1104	𢃻	_p4	660	0	0	
1105	𢃼	_m1	633	0	0	
1106	𢃽	_v1	932	0	0	
1107	𢃾	_z1	1056	0	0	
1108	𢃿	_z1u1	1249	0	0	
1109	𢃾	_z1u2	1313	0	0	
1110	𢃾	_z1r1	1252	0	0	
1111	𢃾	_z1r3	1463	0	0	
1112	𢃿	_s1	1284	0	0	
1113	𢃿	_s1r1	1291	0	0	
1114	𢃿	_s1r2	1292	0	0	
1115	𢃿	_s1r3	1499	-3	0	
1116	𢃿	_h1	1184	0	0	
1117	𢃿	_rh	680	0	0	

Index	Glyph	Name	Adv. Width	lsb	Class	Chars
1118	ꝩ	_rrhrhr3	1635	0	0	
1119	Ꝫ	k1u2.alt1	2241	80	0	
1120	ꝫ	ch1ch1.alt1	1828	80	0	
1121	Ꝭ	ch1ch1u1.alt1	1828	80	0	
1122	ꝭ	ch1ch1u2.alt1	1808	80	0	
1123	Ꝯ	lhh.alt1	2394	80	0	
1124	ꝯ	lhhu1.alt1	2394	80	0	
1125	ꝰ	lhhu2.alt1	2394	80	0	

0.6 OpenType Features

Feature	Description	Scripts	Lookup Tables
aalt	All Alternates	DFLT, mlm2, mlym	0
akhn	N/A	mlm2, mlym	1, 53, 10
blwf	N/A	mlym	2
blwf	N/A	mlm2	3
blws	N/A	mlm2, mlym	56, 9
half	N/A	mlym	1, 4
haln	N/A	mlym	1
pref	N/A	mlm2	7
pres	N/A	mlym	54
pres	N/A	mlm2	55
pstf	N/A	mlym	5
pstf	N/A	mlm2	6
psts	N/A	mlm2, mlym	57, 52
salt	Stylistic Alternates	DFLT, mlm2, mlym	58

0.7 GSUB Substitutions

Table	Feature	Substitution
0	aalt	ꝫ(ch1ch1) → Ꝭ(ch1ch1), ꝭ(ch1ch1.alt1)
0	aalt	ꝫ(ch1ch1u1) → Ꝭ(ch1ch1u1), ꝭ(ch1ch1u1.alt1)
0	aalt	ꝫ(ch1ch1u2) → Ꝭ(ch1ch1u2), ꝭ(ch1ch1u2.alt1)
0	aalt	Ꝫ(k1u2) → Ꝫ(k1u2), Ꝫ(k1u2.alt1)
0	aalt	ꝩ(lhh) → ꝩ(lhh), ꝩ(lhh.alt1)
0	aalt	ꝩ(lhhu1) → ꝩ(lhhu1), ꝩ(lhhu1.alt1)
0	aalt	ꝩ(lhhu2) → ꝩ(lhhu1), ꝩ(lhhu2.alt1)
1	akhn, half, haln	ꝩ(k1) ՞(xx) ՚(ZWJ) → ꝩ(k1cil)
1	akhn, half, haln	ꝩ(I3) ՞(xx) ՚(ZWJ) → ꝩ(I3cil)
1	akhn, half, haln	ꝩ(lh) ՞(xx) ՚(ZWJ) → ꝩ(lhcil)

Table	Feature	Substitution
1	akhn, half, haln	$\underline{\text{ə}}(m1)^\vee(xx) \xrightarrow{\text{f}} (\text{ZWJ}) \rightarrow \underline{\text{ə}}(m1cil)$
1	akhn, half, haln	$\underline{\text{ə}}(n1)^\vee(xx) \xrightarrow{\text{f}} (\text{ZWJ}) \rightarrow \underline{\text{ə}}(n1cil)$
1	akhn, half, haln	$\underline{\text{ə}}(\text{nh})^\vee(xx) \xrightarrow{\text{f}} (\text{ZWJ}) \rightarrow \underline{\text{ə}}(\text{nhcil})$
1	akhn, half, haln	$\underline{\text{ə}}(r3)^\vee(xx) \xrightarrow{\text{f}} (\text{ZWJ}) \rightarrow \underline{\text{ə}}(r3cil)$
1	akhn, half, haln	$\underline{\text{ə}}(y1)^\vee(xx) \xrightarrow{\text{f}} (\text{ZWJ}) \rightarrow \underline{\text{ə}}(y1cil)$
2	blwf	$\underline{\text{ə}}(l3)^\vee(xx) \rightarrow \underline{\text{ə}}(l4)$
3	blwf	$(xx) \underline{\text{ə}}(l3) \rightarrow (l4)$
4	half	$\underline{\text{ə}}(\text{ch1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{ch1xx})$
4	half	$\underline{\text{ə}}(\text{ch2})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{ch2xx})$
4	half	$\underline{\text{ə}}(\text{ch3})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{ch3xx})$
4	half	$\underline{\text{ə}}(\text{ch4})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{ch4xx})$
4	half	$\underline{\text{ə}}(\text{h1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{h1xx})$
4	half	$\underline{\text{ə}}(\text{k1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{k1xx})$
4	half	$\underline{\text{ə}}(\text{k2})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{k2xx})$
4	half	$\underline{\text{ə}}(\text{k3})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{k3xx})$
4	half	$\underline{\text{ə}}(\text{k4})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{k4xx})$
4	half	$\underline{\text{ə}}(l3)^\vee(xx) \rightarrow \underline{\text{ə}}(l3xx)$
4	half	$\underline{\text{ə}}(lh)^\vee(xx) \rightarrow \underline{\text{ə}}(lhxx)$
4	half	$\underline{\text{ə}}(m1)^\vee(xx) \rightarrow \underline{\text{ə}}(\text{m1xx})$
4	half	$\underline{\text{ə}}(n1)^\vee(xx) \rightarrow \underline{\text{ə}}(\text{n1xx})$
4	half	$\underline{\text{ə}}(\text{ng})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{ngxx})$
4	half	$\underline{\text{ə}}(\text{nh})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{nhxx})$
4	half	$\underline{\text{ə}}(\text{nj})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{njxx})$
4	half	$\underline{\text{ə}}(\text{p1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{p1xx})$
4	half	$\underline{\text{ə}}(\text{p2})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{p2xx})$
4	half	$\underline{\text{ə}}(\text{p3})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{p3xx})$
4	half	$\underline{\text{ə}}(\text{p4})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{p4xx})$
4	half	$\underline{\text{ə}}(\text{r3})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{r3xx})$
4	half	$\underline{\text{ə}}(\text{rh})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{rhxx})$
4	half	$\underline{\text{ə}}(\text{s1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{s1xx})$
4	half	$\underline{\text{ə}}(\text{sh})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{shxx})$
4	half	$\underline{\text{ə}}(\text{t1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{t1xx})$
4	half	$\underline{\text{ə}}(\text{t2})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{t2xx})$
4	half	$\underline{\text{ə}}(\text{t3})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{t3xx})$
4	half	$\underline{\text{ə}}(\text{t4})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{t4xx})$
4	half	$\underline{\text{ə}}(\text{th1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{th1xx})$
4	half	$\underline{\text{ə}}(\text{th2})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{th2xx})$
4	half	$\underline{\text{ə}}(\text{th3})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{th3xx})$
4	half	$\underline{\text{ə}}(\text{th4})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{th4xx})$
4	half	$\underline{\text{ə}}(\text{v1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{v1xx})$
4	half	$\underline{\text{ə}}(\text{y1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{y1xx})$
4	half	$\underline{\text{ə}}(\text{z1})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{z1xx})$
4	half	$\underline{\text{ə}}(\text{zh})^\vee(xx) \rightarrow \underline{\text{ə}}(\text{zhxx})$

Table	Feature	Substitution
5	pstf	$\textcolor{blue}{o}(r3)^\vee(xx) \rightarrow \textcolor{blue}{l}(r4)$
5	pstf	$\textcolor{blue}{o}(v1)^\vee(xx) \rightarrow \textcolor{blue}{l}(v2)$
5	pstf	$\textcolor{blue}{o}(y1)^\vee(xx) \rightarrow \textcolor{blue}{l}(y2)$
6	pstf	$^\vee(xx) \textcolor{blue}{o}(v1) \rightarrow \textcolor{blue}{l}(v2)$
6	pstf	$^\vee(xx) \textcolor{blue}{o}(y1) \rightarrow \textcolor{blue}{l}(y2)$
7	pref	$^\vee(xx) \textcolor{blue}{o}(r3) \rightarrow \textcolor{blue}{l}(r4)$
8		$^\vee(l4) \rightarrow \textcolor{blue}{o}(xx) \textcolor{blue}{o}(l3)$
11		$\textcolor{blue}{k}(k1)^\vee(xx) \textcolor{blue}{s}(t1) \rightarrow \textcolor{blue}{k}(k1t1)$
12		$\textcolor{blue}{k}(k1)^\vee(xx) \textcolor{blue}{m}(n1) \rightarrow \textcolor{blue}{k}(k1n1)$
13		$\textcolor{blue}{k}(k1)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{k}(k1m1)$
14		$\textcolor{blue}{k}(k1)^\vee(xx) \textcolor{blue}{s}(sh)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{k}(\textcolor{blue}{s}(sh)(k1shm1))$
15		$\textcolor{blue}{k}(k1)^\vee(xx) \textcolor{blue}{s}(sh)^\vee(xx) \textcolor{blue}{m}(nh) \rightarrow \textcolor{blue}{k}(\textcolor{blue}{s}(sh)(k1shnh))$
16		$\textcolor{blue}{k}(k1)^\vee(xx) \textcolor{blue}{o}(rh)^\vee(xx) \textcolor{blue}{o}(rh) \rightarrow \textcolor{blue}{k}(\textcolor{blue}{o}(rh)(k1hrh))$
17		$\textcolor{blue}{o}(k3)^\vee(xx) \textcolor{blue}{o}(k4) \rightarrow \textcolor{blue}{o}(k3k4)$
18		$\textcolor{blue}{o}(k4)^\vee(xx) \textcolor{blue}{m}(n1) \rightarrow \textcolor{blue}{o}(k4n1)$
19		$\textcolor{blue}{o}(ch1)^\vee(xx) \textcolor{blue}{o}(ch2) \rightarrow \textcolor{blue}{o}(ch1ch2)$
20		$\textcolor{blue}{o}(ch3)^\vee(xx) \textcolor{blue}{o}(nj) \rightarrow \textcolor{blue}{o}(ch3)(nj)$
21		$\textcolor{blue}{o}(nj)^\vee(xx) \textcolor{blue}{o}(ch3) \rightarrow \textcolor{blue}{o}(njch3)$
22		$\textcolor{blue}{o}(t3)^\vee(xx) \textcolor{blue}{o}(t3) \rightarrow \textcolor{blue}{o}(t3t3)$
23		$\textcolor{blue}{o}(t3)^\vee(xx) \textcolor{blue}{o}(t4) \rightarrow \textcolor{blue}{o}(t3t4)$
24		$\textcolor{blue}{o}(nh)^\vee(xx) \textcolor{blue}{o}(t4) \rightarrow \textcolor{blue}{o}(nh)(t4)$
25		$\textcolor{blue}{o}(nh)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{o}(nhm1)$
26		$\textcolor{blue}{o}(th1)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{o}(th1m1)$
27		$\textcolor{blue}{o}(th1)^\vee(xx) \textcolor{blue}{m}(s1)^\vee(xx) \textcolor{blue}{m}(n1) \rightarrow \textcolor{blue}{o}(th1s1n1)$
28		$\textcolor{blue}{o}(th1)^\vee(xx) \textcolor{blue}{m}(s1)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{o}(th1s1m1)$
29		$\textcolor{blue}{o}(p1)^\vee(xx) \textcolor{blue}{o}(th1) \rightarrow \textcolor{blue}{o}(p1th1)$
30		$\textcolor{blue}{o}(p1)^\vee(xx) \textcolor{blue}{o}(p2) \rightarrow \textcolor{blue}{o}(p1p2)$
31		$\textcolor{blue}{o}(p1)^\vee(xx) \textcolor{blue}{o}(s1) \rightarrow \textcolor{blue}{o}(p1s1)$
32		$\textcolor{blue}{o}(p3)^\vee(xx) \textcolor{blue}{o}(th3) \rightarrow \textcolor{blue}{o}(p3th3)$
33		$\textcolor{blue}{o}(y1)^\vee(xx) \textcolor{blue}{k}(k1) \rightarrow \textcolor{blue}{o}(y1k1)$
34		$\textcolor{blue}{o}(y1)^\vee(xx) \textcolor{blue}{o}(th1) \rightarrow \textcolor{blue}{o}(y1th1)$
35		$\textcolor{blue}{o}(l3)^\vee(xx) \textcolor{blue}{k}(k1) \rightarrow \textcolor{blue}{o}(l3k1)$
36		$\textcolor{blue}{o}(z1)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{o}(z1m1)$
37		$\textcolor{blue}{o}(z1)^\vee(xx) \textcolor{blue}{o}(z1) \rightarrow \textcolor{blue}{o}(z1z1)$
38		$\textcolor{blue}{o}(sh)^\vee(xx) \textcolor{blue}{k}(k1) \rightarrow \textcolor{blue}{o}(shk1)$
39		$\textcolor{blue}{o}(sh)^\vee(xx) \textcolor{blue}{s}(t1) \rightarrow \textcolor{blue}{o}(sht1)$
40		$\textcolor{blue}{o}(sh)^\vee(xx) \textcolor{blue}{o}(t2) \rightarrow \textcolor{blue}{o}(sht2)$
41		$\textcolor{blue}{o}(sh)^\vee(xx) \textcolor{blue}{o}(nh) \rightarrow \textcolor{blue}{o}(shnh)$
42		$\textcolor{blue}{o}(sh)^\vee(xx) \textcolor{blue}{o}(p1) \rightarrow \textcolor{blue}{o}(shp1)$
43		$\textcolor{blue}{o}(sh)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{o}(shm1)$
44		$\textcolor{blue}{o}(s1)^\vee(xx) \textcolor{blue}{k}(k1) \rightarrow \textcolor{blue}{o}(s1k1)$
45		$\textcolor{blue}{o}(s1)^\vee(xx) \textcolor{blue}{m}(m1) \rightarrow \textcolor{blue}{o}(s1m1)$
46		$\textcolor{blue}{o}(s1)^\vee(xx) \textcolor{blue}{m}(n1) \rightarrow \textcolor{blue}{o}(s1n1)$

Table	Feature	Substitution
47		$\text{m}(s1)^\vee(xx) \text{ a}(p1) \rightarrow \text{m}_1(s1p1)$
48		$\text{m}(s1)^\vee(xx) \text{ w}(th1) \rightarrow \text{m}_1(s1th1)$
49		$\text{m}(s1)^\vee(xx) \text{ m}(s1) \rightarrow \text{m}_1(s1s1)$
50		$\text{f}(zh)^\vee(xx) \text{ k}(k1) \rightarrow \text{f}_1(zhk1)$
51		$\text{f}(zh)^\vee(xx) \text{ u}(ch1) \rightarrow \text{f}_1(zhch1)$
52	psts	$\text{f}_1(shk1) \text{ y}(r1) \rightarrow \text{f}_1(shk1r1)$
52	psts	$\text{f}_1(shk1) \text{ y}(u1) \rightarrow \text{f}_1(shk1u1)$
52	psts	$\text{f}_1(shk1) \text{ y}(u2) \rightarrow \text{f}_1(shk1u2)$
53	akhn	$\text{u}(ch1)^\vee(xx) \text{ u}(ch1) \rightarrow \text{u}_1(ch1ch1)$
53	akhn	$\text{w}(ch3)^\vee(xx) \text{ w}(ch3) \rightarrow \text{w}_1(ch3ch3)$
53	akhn	$\text{a}(h1)^\vee(xx) \text{ a}(m1) \rightarrow \text{a}_1(h1m1)$
53	akhn	$\text{a}(h1)^\vee(xx) \text{ m}(n1) \rightarrow \text{a}_1(h1n1)$
53	akhn	$\text{k}(k1)_{\text{a}}(l1) \rightarrow \text{k}_1(l1)$
53	akhn	$\text{k}(k1)^\vee(xx) \text{ k}(k1) \rightarrow \text{k}_1(k1k1)$
53	akhn	$\text{k}(k1)^\vee(xx) \text{ m}(nh) \rightarrow \text{k}_1(k1nh)$
53	akhn	$\text{k}(k1)^\vee(xx) \text{ m}(s1) \rightarrow \text{k}_1(k1s1)$
53	akhn	$\text{k}(k1)^\vee(xx) \text{ a}(sh) \rightarrow \text{k}_1(sh)$
53	akhn	$\text{k}(k1)^\vee(xx) \text{ w}(th1) \rightarrow \text{k}_1(th1)$
53	akhn	$\text{u}(k3)^\vee(xx) \text{ w}(k3) \rightarrow \text{u}_1(k3k3)$
53	akhn	$\text{u}(k3)^\vee(xx) \text{ a}(m1) \rightarrow \text{u}_1(k3m1)$
53	akhn	$\text{u}(k3)^\vee(xx) \text{ m}(n1) \rightarrow \text{u}_1(k3n1)$
53	akhn	$\text{u}(k3)^\vee(xx) \text{ a}(th3) \rightarrow \text{u}_1(k3th3)$
53	akhn	$\text{u}(k3)^\vee(xx) \text{ a}(th3)^\vee(xx) \text{ w}(th4) \rightarrow \text{u}_1(k3th3th4)$
53	akhn	$\text{u}_1(l3)^\vee(xx) \text{ u}_1(l3) \rightarrow \text{u}_1(l3l3)$
53	akhn	$\text{u}_1(l3)^\vee(xx) \text{ a}(p1) \rightarrow \text{u}_1(l3p1)$
53	akhn	$\text{u}_1(lh)^\vee(xx) \text{ u}_1(lh) \rightarrow \text{u}_1(lhh)$
53	akhn	$\text{a}(m1)^\vee(xx) \text{ a}(m1) \rightarrow \text{a}_1(m1m1)$
53	akhn	$\text{a}(m1)^\vee(xx) \text{ a}(p1) \rightarrow \text{a}_1(m1p1)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ a}(m1) \rightarrow \text{m}_1(m1m1)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ m}(n1) \rightarrow \text{m}_1(n1n1)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ o}(rh) \rightarrow \text{m}_1(n1rh)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ w}(th1) \rightarrow \text{m}_1(n1th1)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ a}(th2) \rightarrow \text{m}_1(n1th2)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ a}(th3) \rightarrow \text{m}_1(n1th3)$
53	akhn	$\text{m}(n1)^\vee(xx) \text{ w}(th4) \rightarrow \text{m}_1(n1th4)$
53	akhn	$\text{w}(ng)^\vee(xx) \text{ k}(k1) \rightarrow \text{w}_1(ngk1)$
53	akhn	$\text{w}(ng)^\vee(xx) \text{ w}(ng) \rightarrow \text{w}_1(ngng)$
53	akhn	$\text{m}(nh)^\vee(xx) \text{ m}(nh) \rightarrow \text{m}_1(nhh)$
53	akhn	$\text{m}(nh)^\vee(xx) \text{ s}(t1) \rightarrow \text{m}_1(nht1)$
53	akhn	$\text{m}(nh)^\vee(xx) \text{ o}(t2) \rightarrow \text{m}_1(nht2)$
53	akhn	$\text{m}(nh)^\vee(xx) \text{ w}(t3) \rightarrow \text{m}_1(nht3)$
53	akhn	$\text{w}(nj)^\vee(xx) \text{ u}(ch1) \rightarrow \text{w}_1(njch1)$
53	akhn	$\text{w}(nj)^\vee(xx) \text{ u}(ch2) \rightarrow \text{w}_1(njch2)$

Table	Feature	Substitution
53	akhn	$\text{ئ}(nj)^\vee(xx) \text{ئ}(nj) \rightarrow \text{ئئ}(njnj)$
53	akhn	$\text{ا}(p1)^\vee(xx) \text{ا}(n1) \rightarrow \text{ا}(p1n1)$
53	akhn	$\text{ا}(p1)^\vee(xx) \text{ا}(p1) \rightarrow \text{ا}(p1p1)$
53	akhn	$\text{ئا}(p3)^\vee(xx) \text{ئا}(p3) \rightarrow \text{ئئا}(p3p3)$
53	akhn	$\text{ئا}(rh)^\vee(xx) \text{ئا}(rh) \rightarrow \text{ئئا}(rhrh)$
53	akhn	$\text{ئا}(s1)^\vee(xx) \text{ئا}(rh)^\vee(xx) \text{ئا}(rh) \rightarrow \text{ئئا}(s1rhrh)$
53	akhn	$\text{ئا}(s1)^\vee(xx) \text{ئا}(th2) \rightarrow \text{ئئا}(s1th2)$
53	akhn	$\text{ئئا}(s1k1)^\vee(xx) \text{ك}(k1) \rightarrow \text{ئئا}(s1k1k1)$
53	akhn	$\text{س}(t1)^\vee(xx) \text{س}(t1) \rightarrow \text{س}(t1t1)$
53	akhn	$\text{ئا}(th1)^\vee(xx) \text{ئا}(n1) \rightarrow \text{ئئا}(th1n1)$
53	akhn	$\text{ئا}(th1)^\vee(xx) \text{ئا}(p4) \rightarrow \text{ئئا}(th1p4)$
53	akhn	$\text{ئا}(th1)^\vee(xx) \text{ئا}(s1) \rightarrow \text{ئئا}(th1s1)$
53	akhn	$\text{ئا}(th1)^\vee(xx) \text{ئا}(th1) \rightarrow \text{ئئا}(th1th1)$
53	akhn	$\text{ئا}(th1)^\vee(xx) \text{ئا}(th2) \rightarrow \text{ئئا}(th1th2)$
53	akhn	$\text{ئا}(th3)^\vee(xx) \text{ئا}(th3) \rightarrow \text{ئئا}(th3th3)$
53	akhn	$\text{ئا}(th3)^\vee(xx) \text{ئا}(th4) \rightarrow \text{ئئا}(th3th4)$
53	akhn	$\text{ئا}(v1)^\vee(xx) \text{ئا}(v1) \rightarrow \text{ئئا}(v1v1)$
53	akhn	$\text{ئا}(y1)^\vee(xx) \text{ئا}(y1) \rightarrow \text{ئئا}(y1y1)$
53	akhn	$\text{ئئا}(y1k1)^\vee(xx) \text{ك}(k1) \rightarrow \text{ئئا}(y1k1k1)$
53	akhn	$\text{ئا}(z1)^\vee(xx) \text{ئا}(ch1) \rightarrow \text{ئئا}(z1ch1)$
53	akhn	$\text{ئا}(z1)^\vee(xx) \text{ئا}(ch2) \rightarrow \text{ئئا}(z1ch2)$
53	akhn	$\text{ئا}(z1)^\vee(xx) \text{ئا}(n1) \rightarrow \text{ئئا}(z1n1)$
54	pres	$\text{ا}(ch1ch2) \text{ل}(r4) \rightarrow \text{ا}(ch1ch2r3)$
54	pres	$\text{ا}(ch1ch2)^\vee(xx) \text{ا}(r3) \rightarrow \text{ا}(ch1ch2r3)$
54	pres	$\text{ئا}(ch2) \text{ل}(r4) \rightarrow \text{ئا}(ch2r3)$
54	pres	$\text{ئا}(ch2)^\vee(xx) \text{ا}(r3) \rightarrow \text{ئا}(ch2r3)$
54	pres	$\text{ئا}(ch3) \text{ل}(r4) \rightarrow \text{ئا}(ch3r3)$
54	pres	$\text{ئا}(ch3xx) \text{ا}(r3) \rightarrow \text{ئا}(ch3r3)$
54	pres	$\text{ئا}(h1) \text{ل}(r4) \rightarrow \text{ئا}(h1r3)$
54	pres	$\text{ك}(k1) \text{ل}(r4) \rightarrow \text{ك}(k1r3)$
54	pres	$\text{ك}(k1k1) \text{ل}(r4) \rightarrow \text{ك}(k1k1r3)$
54	pres	$\text{ك}(k1k1)^\vee(xx) \text{ا}(r3) \rightarrow \text{ك}(k1k1r3)$
54	pres	$\text{ك}(k1rhrh) \text{ل}(r4) \rightarrow \text{ك}(k1rhrhr3)$
54	pres	$\text{ك}(k1rhrh)^\vee(xx) \text{ا}(r3) \rightarrow \text{ك}(k1rhrhr3)$
54	pres	$\text{ك}(k1s1) \text{ل}(r4) \rightarrow \text{ك}(k1s1r3)$
54	pres	$\text{ك}(k1s1)^\vee(xx) \text{ا}(r3) \rightarrow \text{ك}(k1s1r3)$
54	pres	$\text{كئ}(k1th1) \text{ل}(r4) \rightarrow \text{كئ}(k1th1r3)$
54	pres	$\text{كئ}(k1th1)^\vee(xx) \text{ا}(r3) \rightarrow \text{كئ}(k1th1r3)$
54	pres	$\text{كئ}(k1xx) \text{ا}(r3) \rightarrow \text{ك}(k1r3)$
54	pres	$\text{ئا}(k2) \text{ل}(r4) \rightarrow \text{ئا}(k2r3)$
54	pres	$\text{ئا}(k2)^\vee(xx) \text{ا}(r3) \rightarrow \text{ئا}(k2r3)$
54	pres	$\text{ئا}(k3) \text{ل}(r4) \rightarrow \text{ئا}(k3r3)$
54	pres	$\text{ئئا}(k3k3) \text{ل}(r4) \rightarrow \text{ئئا}(k3k3r3)$

Table	Feature	Substitution
54	pres	$\text{g}(k3k3)^\vee(xx) \text{ o}(r3) \rightarrow \text{g}(k3k3r3)$
54	pres	$\text{su}(k3\text{th}3\text{th}4) \text{ l}(r4) \rightarrow \text{su}(k3\text{th}3\text{th}4r3)$
54	pres	$\text{su}(k3\text{th}3\text{th}4)^\vee(xx) \text{ o}(r3) \rightarrow \text{su}(k3\text{th}3\text{th}4r3)$
54	pres	$\text{s}^\vee(k3xx) \text{ o}(r3) \rightarrow \text{s}(k3r3)$
54	pres	$\text{a}\text{u}(k4) \text{ l}(r4) \rightarrow \text{a}\text{u}(k4r3)$
54	pres	$\text{a}\text{u}^\vee(k4xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(k4r3)$
54	pres	$\text{a}\text{u}(l3k1) \text{ l}(r4) \rightarrow \text{a}\text{u}(l3k1r3)$
54	pres	$\text{a}\text{u}(l3k1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(l3k1r3)$
54	pres	$\text{a}\text{u}^\vee(l3xx) \text{ a}\text{u}(l3) \rightarrow \text{a}\text{u}(l3l3)$
54	pres	$\text{a}(m1) \text{ l}(r4) \rightarrow \text{a}(m1r3)$
54	pres	$\text{a}\text{u}(m1p1) \text{ l}(r4) \rightarrow \text{a}\text{u}(m1p1r3)$
54	pres	$\text{a}\text{u}(m1p1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(m1p1r3)$
54	pres	$\text{a}(n1) \text{ l}(r4) \rightarrow \text{a}(n1r3)$
54	pres	$\text{a}(n1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}(n1r3)$
54	pres	$\text{a}(n1m1) \text{ l}(r4) \rightarrow \text{a}(n1m1r3)$
54	pres	$\text{a}(n1m1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}(n1m1r3)$
54	pres	$\text{a}(n1n1) \text{ l}(r4) \rightarrow \text{a}(n1n1r3)$
54	pres	$\text{a}(n1n1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}(n1n1r3)$
54	pres	$\text{a}\text{u}(n1\text{th}1) \text{ l}(r4) \rightarrow \text{a}\text{u}(n1\text{th}1r3)$
54	pres	$\text{a}\text{u}(n1\text{th}1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(n1\text{th}1r3)$
54	pres	$\text{a}\text{u}(n1\text{th}3) \text{ l}(r4) \rightarrow \text{a}\text{u}(n1\text{th}3r3)$
54	pres	$\text{a}\text{u}(n1\text{th}3)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(n1\text{th}3r3)$
54	pres	$\text{a}\text{u}(n1\text{th}4) \text{ l}(r4) \rightarrow \text{a}\text{u}(n1\text{th}4r3)$
54	pres	$\text{a}\text{u}(n1\text{th}4)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(n1\text{th}4r3)$
54	pres	$\text{a}\text{u}(ngk1) \text{ l}(r4) \rightarrow \text{a}\text{u}(ngk1r3)$
54	pres	$\text{a}\text{u}(ngk1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(ngk1r3)$
54	pres	$\text{a}\text{u}(nht1) \text{ l}(r4) \rightarrow \text{a}\text{u}(nht1r3)$
54	pres	$\text{a}\text{u}(nht1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(nht1r3)$
54	pres	$\text{a}\text{u}\text{w}(nht3) \text{ l}(r4) \rightarrow \text{a}\text{u}\text{w}(nht3r3)$
54	pres	$\text{a}\text{u}\text{w}(nht3)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}\text{w}(nht3r3)$
54	pres	$\text{a}\text{u}\text{w}(p1) \text{ l}(r4) \rightarrow \text{a}\text{u}(p1r3)$
54	pres	$\text{a}\text{u}^\vee(p1xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(p1r3)$
54	pres	$\text{a}\text{u}(p2) \text{ l}(r4) \rightarrow \text{a}\text{u}(p2r3)$
54	pres	$\text{a}\text{u}^\vee(p2xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(p2r3)$
54	pres	$\text{a}\text{u}(p3) \text{ l}(r4) \rightarrow \text{a}\text{u}(p3r3)$
54	pres	$\text{a}\text{u}^\vee(p3xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(p3r3)$
54	pres	$\text{a}\text{u}(p4) \text{ l}(r4) \rightarrow \text{a}\text{u}(p4r3)$
54	pres	$\text{a}\text{u}^\vee(p4xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(p4r3)$
54	pres	$\text{a}\text{u}(rhrh) \text{ l}(r4) \rightarrow \text{a}\text{u}(rhrhr3)$
54	pres	$\text{a}\text{u}(rhrh)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}(rhrhr3)$
54	pres	$\text{a}\text{u}(s1) \text{ l}(r4) \rightarrow \text{a}\text{u}(s1r3)$
54	pres	$\text{a}\text{u}\text{w}(s1k1) \text{ l}(r4) \rightarrow \text{a}\text{u}\text{w}(s1k1r3)$
54	pres	$\text{a}\text{u}\text{w}(s1k1)^\vee(xx) \text{ o}(r3) \rightarrow \text{a}\text{u}\text{w}(s1k1r3)$

Table	Feature	Substitution
54	pres	$\text{ং}(s1k1k1) \text{ ল}(r4) \rightarrow \text{ং}(s1k1k1r3)$
54	pres	$\text{ং}(s1k1k1) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ং}(s1k1k1r3)$
54	pres	$\text{ং}(s1rhrh) \text{ ল}(r4) \rightarrow \text{ং}(s1rhrhr3)$
54	pres	$\text{ং}(s1rhrh) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ং}(s1rhrhr3)$
54	pres	$\text{ং}(s1th1) \text{ ল}(r4) \rightarrow \text{ং}(s1th1r3)$
54	pres	$\text{ং}(s1th1) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ং}(s1th1r3)$
54	pres	$\text{ৰ}(s1xx) \text{ র}(r3) \rightarrow \text{ৰ}(s1r3)$
54	pres	$\text{শ}(sh) \text{ ল}(r4) \rightarrow \text{শ}(shr3)$
54	pres	$\text{শ}(sh) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{শ}(shr3)$
54	pres	$\text{ঝ}(shk1) \text{ ল}(r4) \rightarrow \text{ঝ}(shk1r3)$
54	pres	$\text{ঝ}(shk1) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ঝ}(shk1r3)$
54	pres	$\text{ঝ}(sht1) \text{ ল}(r4) \rightarrow \text{ঝ}(sht1r3)$
54	pres	$\text{ঝ}(sht1) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ঝ}(sht1r3)$
54	pres	$\text{স}(t1) \text{ ল}(r4) \rightarrow \text{স}(t1r3)$
54	pres	$\text{শ}(t1xx) \text{ র}(r3) \rightarrow \text{শ}(t1r3)$
54	pres	$\text{ব}(t3) \text{ ল}(r4) \rightarrow \text{ব}(t3r3)$
54	pres	$\text{ব}(t3xx) \text{ র}(r3) \rightarrow \text{ব}(t3r3)$
54	pres	$\text{ব}(t4) \text{ ল}(r4) \rightarrow \text{ব}(t4r3)$
54	pres	$\text{ব}(t4) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ব}(t4r3)$
54	pres	$\text{ঘ}(th1) \text{ ল}(r4) \rightarrow \text{ঘ}(th1r3)$
54	pres	$\text{ঘ}(th1s1) \text{ ল}(r4) \rightarrow \text{ঘ}(th1s1r3)$
54	pres	$\text{ঘ}(th1s1) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ঘ}(th1s1r3)$
54	pres	$\text{ঘ}(th1th1) \text{ ল}(r4) \rightarrow \text{ঘ}(th1th1r3)$
54	pres	$\text{ঘ}(th1th1) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{ঘ}(th1th1r3)$
54	pres	$\text{ঘ}(th1xx) \text{ র}(r3) \rightarrow \text{ঘ}(th1r3)$
54	pres	$\text{঱}(th2) \text{ ল}(r4) \rightarrow \text{঱}(th2r3)$
54	pres	$\text{঱}(th2) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{঱}(th2r3)$
54	pres	$\text{঱}(th3) \text{ ল}(r4) \rightarrow \text{঱}(th3r3)$
54	pres	$\text{঱}(th3th4) \text{ ল}(r4) \rightarrow \text{঱}(th3th4r3)$
54	pres	$\text{঱}(th3th4) \text{ চ}(xx) \text{ র}(r3) \rightarrow \text{঱}(th3th4r3)$
54	pres	$\text{঱}(th3xx) \text{ র}(r3) \rightarrow \text{঱}(th3r3)$
54	pres	$\text{঱}(th4) \text{ ল}(r4) \rightarrow \text{঱}(th4r3)$
54	pres	$\text{঱}(v1) \text{ ল}(r4) \rightarrow \text{঱}(v1r3)$
54	pres	$\text{঱}(v1xx) \text{ র}(r3) \rightarrow \text{঱}(v1r3)$
54	pres	$\text{঱}(z1) \text{ ল}(r4) \rightarrow \text{঱}(z1r3)$
54	pres	$\text{঱}(z1xx) \text{ র}(r3) \rightarrow \text{঱}(z1r3)$
55	pres	$\text{ঁ}(r4) \text{ খ}(ch1ch2) \rightarrow \text{খ}(ch1ch2r3)$
55	pres	$\text{ঁ}(r4) \text{ খ}(ch2) \rightarrow \text{খ}(ch2r3)$
55	pres	$\text{ঁ}(r4) \text{ জ}(ch3) \rightarrow \text{জ}(ch3r3)$
55	pres	$\text{ঁ}(r4) \text{ ঘ}(ch4) \rightarrow \text{ঘ}(ch4r3)$
55	pres	$\text{ঁ}(r4) \text{ হ}(h1) \rightarrow \text{হ}(h1r3)$
55	pres	$\text{ঁ}(r4) \text{ ক}(k1) \rightarrow \text{ক}(k1r3)$
55	pres	$\text{ঁ}(r4) \text{ ক}(k1k1) \rightarrow \text{ক}(k1k1r3)$

Table	Feature	Substitution
55	pres	$\text{I(r4) } \text{⠄⠄⠄}(k1rhrh) \rightarrow \text{⠄⠄⠄}(k1rhrhr3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k1s1) \rightarrow \text{⠄⠄}(k1s1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k1t1) \rightarrow \text{⠄⠄}(k1t1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k1th1) \rightarrow \text{⠄⠄⠄}(k1th1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k2) \rightarrow \text{⠄⠄}(k2r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k3) \rightarrow \text{⠄⠄}(k3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k3k3) \rightarrow \text{⠄⠄}(k3k3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄⠄}(k3th3th4) \rightarrow \text{⠄⠄⠄}(k3th3th4r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(k4) \rightarrow \text{⠄⠄}(k4r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(l3k1) \rightarrow \text{⠄⠄}(l3k1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(m1) \rightarrow \text{⠄⠄}(m1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(m1p1) \rightarrow \text{⠄⠄}(m1p1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(n1) \rightarrow \text{⠄⠄}(n1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(n1m1) \rightarrow \text{⠄⠄}(n1m1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(n1n1) \rightarrow \text{⠄⠄}(n1n1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(n1th1) \rightarrow \text{⠄⠄⠄}(n1th1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(n1th3) \rightarrow \text{⠄⠄⠄}(n1th3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(n1th4) \rightarrow \text{⠄⠄⠄}(n1th4r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(ngk1) \rightarrow \text{⠄⠄}(ngk1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(nht1) \rightarrow \text{⠄⠄⠄}(nht1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(nht3) \rightarrow \text{⠄⠄⠄}(nht3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(p1) \rightarrow \text{⠄⠄}(p1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(p2) \rightarrow \text{⠄⠄}(p2r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(p3) \rightarrow \text{⠄⠄}(p3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(p4) \rightarrow \text{⠄⠄}(p4r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(rhrh) \rightarrow \text{⠄⠄⠄}(rhrhr3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(s1) \rightarrow \text{⠄⠄}(s1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(s1k1) \rightarrow \text{⠄⠄}(s1k1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(s1k1k1) \rightarrow \text{⠄⠄}(s1k1k1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(s1rhrh) \rightarrow \text{⠄⠄}(s1rhrhr3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(s1th1) \rightarrow \text{⠄⠄}(s1th1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(sh) \rightarrow \text{⠄⠄}(shr3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(shk1) \rightarrow \text{⠄⠄}(shk1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(sht1) \rightarrow \text{⠄⠄}(sht1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(t1) \rightarrow \text{⠄⠄}(t1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(t3) \rightarrow \text{⠄⠄}(t3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(t4) \rightarrow \text{⠄⠄}(t4r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(th1) \rightarrow \text{⠄⠄}(th1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(th1s1) \rightarrow \text{⠄⠄⠄}(th1s1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(th1th1) \rightarrow \text{⠄⠄⠄}(th1th1r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(th2) \rightarrow \text{⠄⠄}(th2r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(th3) \rightarrow \text{⠄⠄}(th3r3)$
55	pres	$\text{I(r4) } \text{⠄⠄}(th3th4) \rightarrow \text{⠄⠄⠄}(th3th4r3)$

Table	Feature	Substitution
55	pres	$\text{t(r4) } \omega(\text{th4}) \rightarrow \underline{\omega}(\text{th4r3})$
55	pres	$\text{t(r4) } \omega(v1) \rightarrow \underline{\omega}(v1r3)$
55	pres	$\text{t(r4) } \omega(z1) \rightarrow \underline{\omega}(z1r3)$
56	blws	$\omega(h1)_{\text{u}}(l4) \rightarrow \underline{\omega}(h1l3)$
56	blws	$\omega(h1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(h1l3)$
56	blws	$\omega(k1)_{\text{u}}(l4) \rightarrow \underline{\omega}(k1l3)$
56	blws	$\omega(k1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(k3l3)$
56	blws	$\omega(k3)_{\text{u}}(l4) \rightarrow \underline{\omega}(k3l3)$
56	blws	$\omega(k3xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(k3l3)$
56	blws	$\omega(l3)_{\text{u}}(l4) \rightarrow \underline{\omega}(l3l3)$
56	blws	$\omega(m1)_{\text{u}}(l4) \rightarrow \underline{\omega}(m1l3)$
56	blws	$\omega(m1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(m1l3)$
56	blws	$\omega(p1)_{\text{u}}(l4) \rightarrow \underline{\omega}(p1l3)$
56	blws	$\omega(p1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(p1l3)$
56	blws	$\omega(p2)_{\text{u}}(l4) \rightarrow \underline{\omega}(p2l3)$
56	blws	$\omega(p2xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(p2l3)$
56	blws	$\omega(p3)_{\text{u}}(l4) \rightarrow \underline{\omega}(p3l3)$
56	blws	$\omega(p3xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(p3l3)$
56	blws	$\omega(s1)_{\text{u}}(l4) \rightarrow \underline{\omega}(s1l3)$
56	blws	$\omega(s1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(s1l3)$
56	blws	$\omega(th1)_{\text{u}}(l4) \rightarrow \underline{\omega}(th1l3)$
56	blws	$\omega(th1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(th1l3)$
56	blws	$\omega(v1)_{\text{u}}(l4) \rightarrow \underline{\omega}(v1l3)$
56	blws	$\omega(v1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(v1l3)$
56	blws	$\omega(z1)_{\text{u}}(l4) \rightarrow \underline{\omega}(z1l3)$
56	blws	$\omega(z1xx)_{\text{u}}(l3) \rightarrow \underline{\omega}(z1l3)$
57	psts	$\omega(ch1)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch1u1)$
57	psts	$\omega(ch1)_{\text{u}}(u2) \rightarrow \underline{\omega}(ch1u2)$
57	psts	$\omega(ch1ch1)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch1ch1u1)$
57	psts	$\omega(ch1ch1)_{\text{u}}(u2) \rightarrow \underline{\omega}(ch1ch1u2)$
57	psts	$\omega(ch1ch2)_{\text{u}}(r1) \rightarrow \underline{\omega}(ch1ch2r1)$
57	psts	$\omega(ch1ch2)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch1ch2u1)$
57	psts	$\omega(ch1ch2)_{\text{u}}(u2) \rightarrow \underline{\omega}(ch1ch2u2)$
57	psts	$\omega(ch1ch2r3)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch1ch2r3u1)$
57	psts	$\omega(ch1ch2r3)_{\text{u}}(u2) \rightarrow \underline{\omega}(ch1ch2r3u2)$
57	psts	$\omega(ch2)_{\text{u}}(r1) \rightarrow \underline{\omega}(ch2r1)$
57	psts	$\omega(ch2)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch2u1)$
57	psts	$\omega(ch2)_{\text{u}}(u2) \rightarrow \underline{\omega}(ch2u2)$
57	psts	$\omega(ch2r3)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch2r3u1)$
57	psts	$\omega(ch2r3)_{\text{u}}(u2) \rightarrow \underline{\omega}(ch2r3u2)$
57	psts	$\omega(ch3)_{\text{u}}(r1) \rightarrow \underline{\omega}(ch3r1)$
57	psts	$\omega(ch3)_{\text{u}}(r2) \rightarrow \underline{\omega}(ch3r2)$
57	psts	$\omega(ch3)_{\text{u}}(u1) \rightarrow \underline{\omega}(ch3u1)$

Table	Feature	Substitution
57	psts	$\text{zh}(ch3) \downarrow(u2) \rightarrow \underline{\text{zh}}(ch3u2)$
57	psts	$\text{zhh}(ch3ch3) \downarrow(r1) \rightarrow \underline{\text{zhh}}(ch3ch3r1)$
57	psts	$\text{zhh}(ch3ch3) \downarrow(u1) \rightarrow \underline{\text{zhh}}(ch3ch3u1)$
57	psts	$\text{zhh}(ch3ch3) \downarrow(u2) \rightarrow \underline{\text{zhh}}(ch3ch3u2)$
57	psts	$\text{zh}(ch3r3) \downarrow(u1) \rightarrow \underline{\text{zh}}(ch3r3u1)$
57	psts	$\text{zh}(ch3r3) \downarrow(u2) \rightarrow \underline{\text{zh}}(ch3r3u2)$
57	psts	$\text{zh}(ch4) \downarrow(r1) \rightarrow \underline{\text{zh}}(ch4r1)$
57	psts	$\text{zh}(ch4) \downarrow(r2) \rightarrow \underline{\text{zh}}(ch4r2)$
57	psts	$\text{zh}(ch4) \downarrow(u1) \rightarrow \underline{\text{zh}}(ch4u1)$
57	psts	$\text{zh}(ch4) \downarrow(u2) \rightarrow \underline{\text{zh}}(ch4u2)$
57	psts	$\text{zh}(ch4r3) \downarrow(u1) \rightarrow \underline{\text{zh}}(ch4r3u1)$
57	psts	$\text{zh}(ch4r3) \downarrow(u2) \rightarrow \underline{\text{zh}}(ch4r3u2)$
57	psts	$\text{h}(h1) \downarrow(r1) \rightarrow \underline{\text{h}}(h1r1)$
57	psts	$\text{h}(h1) \downarrow(u1) \rightarrow \underline{\text{h}}(h1u1)$
57	psts	$\text{h}(h1) \downarrow(u2) \rightarrow \underline{\text{h}}(h1u2)$
57	psts	$\text{h}(h1l3) \downarrow(u1) \rightarrow \underline{\text{h}}(h1l3u1)$
57	psts	$\text{h}(h1l3) \downarrow(u2) \rightarrow \underline{\text{h}}(h1l3u2)$
57	psts	$\text{h}(h1m1) \downarrow(r1) \rightarrow \underline{\text{h}}(h1m1r1)$
57	psts	$\text{h}(h1m1) \downarrow(u1) \rightarrow \underline{\text{h}}(h1m1u1)$
57	psts	$\text{h}(h1m1) \downarrow(u2) \rightarrow \underline{\text{h}}(h1m1u2)$
57	psts	$\text{h}(h1n1) \downarrow(u1) \rightarrow \underline{\text{h}}(h1n1u1)$
57	psts	$\text{h}(h1n1) \downarrow(u2) \rightarrow \underline{\text{h}}(h1n1u2)$
57	psts	$\text{h}(h1r3) \downarrow(u1) \rightarrow \underline{\text{h}}(h1r3u1)$
57	psts	$\text{h}(h1r3) \downarrow(u2) \rightarrow \underline{\text{h}}(h1r3u2)$
57	psts	$\text{h}(k1) \downarrow(r1) \rightarrow \underline{\text{h}}(k1r1)$
57	psts	$\text{h}(k1) \downarrow(r2) \rightarrow \underline{\text{h}}(k1r2)$
57	psts	$\text{h}(k1) \downarrow(u1) \rightarrow \underline{\text{h}}(k1u1)$
57	psts	$\text{h}(k1) \downarrow(u2) \rightarrow \underline{\text{h}}(k1u2)$
57	psts	$\text{h}(k1k1) \downarrow(r1) \rightarrow \underline{\text{h}}(k1k1r1)$
57	psts	$\text{h}(k1k1) \downarrow(u1) \rightarrow \underline{\text{h}}(k1k1u1)$
57	psts	$\text{h}(k1k1) \downarrow(u2) \rightarrow \underline{\text{h}}(k1k1u2)$
57	psts	$\text{h}(k1k1r3) \downarrow(u1) \rightarrow \underline{\text{h}}(k1k1r3u1)$
57	psts	$\text{h}(k1k1r3) \downarrow(u2) \rightarrow \underline{\text{h}}(k1k1r3u2)$
57	psts	$\text{h}(k1l3) \downarrow(u1) \rightarrow \underline{\text{h}}(k1l3u1)$
57	psts	$\text{h}(k1l3) \downarrow(u2) \rightarrow \underline{\text{h}}(k1l3u2)$
57	psts	$\text{h}(k1m1) \downarrow(u1) \rightarrow \underline{\text{h}}(k1m1u1)$
57	psts	$\text{h}(k1m1) \downarrow(u2) \rightarrow \underline{\text{h}}(k1m1u2)$
57	psts	$\text{h}(k1n1) \downarrow(u1) \rightarrow \underline{\text{h}}(k1n1u1)$
57	psts	$\text{h}(k1n1) \downarrow(u2) \rightarrow \underline{\text{h}}(k1n1u2)$
57	psts	$\text{h}(k1nh) \downarrow(u1) \rightarrow \underline{\text{h}}(k1nhu1)$
57	psts	$\text{h}(k1nh) \downarrow(u2) \rightarrow \underline{\text{h}}(k1nhu2)$
57	psts	$\text{h}(k1r3) \downarrow(u1) \rightarrow \underline{\text{h}}(k1r3u1)$
57	psts	$\text{h}(k1r3) \downarrow(u2) \rightarrow \underline{\text{h}}(k1r3u2)$

Table	Feature	Substitution
57	psts	କୁ(k1rhrh) ଜ(u1)→କୁ(k1rhrhu1)
57	psts	କୁ(k1rhrh) ଜ(u2)→କୁ(k1rhrhu2)
57	psts	କୁ(k1rhrhr3) ଜ(u1)→କୁ(k1rhrhr3u1)
57	psts	କୁ(k1rhrhr3) ଜ(u2)→କୁ(k1rhrhr3u2)
57	psts	କୁ(k1s1) ଜ(r1)→କୁ(k1s1r1)
57	psts	କୁ(k1s1) ଜ(u1)→କୁ(k1s1u1)
57	psts	କୁ(k1s1) ଜ(u2)→କୁ(k1s1u2)
57	psts	କୁ(k1s1r3) ଜ(u1)→କୁ(k1s1r3u1)
57	psts	କୁ(k1s1r3) ଜ(u2)→କୁ(k1s1r3u2)
57	psts	କୁ(k1sh) ଜ(r1)→କୁ(k1shr1)
57	psts	କୁ(k1sh) ଜ(u1)→କୁ(k1shu1)
57	psts	କୁ(k1sh) ଜ(u2)→କୁ(k1shu2)
57	psts	କୁ(k1shm1) ଜ(u1)→କୁ(k1shm1u1)
57	psts	କୁ(k1shm1) ଜ(u2)→କୁ(k1shm1u2)
57	psts	କୁ(k1shnh) ଜ(u1)→କୁ(k1shnhu1)
57	psts	କୁ(k1shnh) ଜ(u2)→କୁ(k1shnhu2)
57	psts	କୁ(k1t1) ଜ(u1)→କୁ(k1t1u1)
57	psts	କୁ(k1t1) ଜ(u2)→କୁ(k1t1u2)
57	psts	କୁ(k1t1r3) ଜ(u1)→କୁ(k1t1r3u1)
57	psts	କୁ(k1t1r3) ଜ(u2)→କୁ(k1t1r3u2)
57	psts	କୁ(k1th1) ଜ(r1)→କୁ(k1th1r1)
57	psts	କୁ(k1th1) ଜ(u1)→କୁ(k1th1u1)
57	psts	କୁ(k1th1) ଜ(u2)→କୁ(k1th1u2)
57	psts	କୁ(k1th1r3) ଜ(u1)→କୁ(k1th1r3u1)
57	psts	କୁ(k1th1r3) ଜ(u2)→କୁ(k1th1r3u2)
57	psts	ବ(k2) ଜ(r1)→ବ(k2r1)
57	psts	ବ(k2) ଜ(u1)→ବ(k2u1)
57	psts	ବ(k2) ଜ(u2)→ବ(k2u2)
57	psts	ବ(k2r3) ଜ(u1)→ବ(k2r3u1)
57	psts	ବ(k2r3) ଜ(u2)→ବ(k2r3u2)
57	psts	ବ(k3) ଜ(r1)→ବ(k3r1)
57	psts	ବ(k3) ଜ(r2)→ବ(k3r2)
57	psts	ବ(k3) ଜ(u1)→ବ(k3u1)
57	psts	ବ(k3) ଜ(u2)→ବ(k3u2)
57	psts	ବ(k3k3) ଜ(r1)→ବ(k3k3r1)
57	psts	ବ(k3k3) ଜ(u1)→ବ(k3k3u1)
57	psts	ବ(k3k3) ଜ(u2)→ବ(k3k3u2)
57	psts	ବ(k3k3r3) ଜ(u1)→ବ(k3k3r3u1)
57	psts	ବ(k3k3r3) ଜ(u2)→ବ(k3k3r3u2)
57	psts	ବା(k3k4) ଜ(u1)→ବା(k3k4u1)
57	psts	ବା(k3k4) ଜ(u2)→ବା(k3k4u2)
57	psts	ବା(k3l3) ଜ(u1)→ବା(k3l3u1)
57	psts	ବା(k3l3) ଜ(u2)→ବା(k3l3u2)

Table	Feature	Substitution
57	psts	斡(k3m1) ↗(u1)→斡(k3m1u1)
57	psts	斡(k3m1) ↗(u2)→斡(k3m1u2)
57	psts	斡(k3n1) ↗(u1)→斡(k3n1u1)
57	psts	斡(k3n1) ↗(u2)→斡(k3n1u2)
57	psts	斡(k3r3) ↗(u1)→斡(k3r3u1)
57	psts	斡(k3r3) ↗(u2)→斡(k3r3u2)
57	psts	斡(k3th3) ↗(r1)→斡(k3th3r1)
57	psts	斡(k3th3) ↗(u1)→斡(k3th3u1)
57	psts	斡(k3th3) ↗(u2)→斡(k3th3u2)
57	psts	斡(k3th3th4) ↗(r1)→斡(k3th3th4r1)
57	psts	斡(k3th3th4) ↗(u1)→斡(k3th3th4u1)
57	psts	斡(k3th3th4) ↗(u2)→斡(k3th3th4u2)
57	psts	斡(k3th3th4r3) ↗(u1)→斡(k3th3th4r3u1)
57	psts	斡(k3th3th4r3) ↗(u2)→斡(k3th3th4r3u2)
57	psts	斡(k4) ↗(r1)→斡(k4r1)
57	psts	斡(k4) ↗(r2)→斡(k4r2)
57	psts	斡(k4) ↗(u1)→斡(k4u1)
57	psts	斡(k4) ↗(u2)→斡(k4u2)
57	psts	斡(k4n1) ↗(u1)→斡(k4n1u1)
57	psts	斡(k4n1) ↗(u2)→斡(k4n1u2)
57	psts	斡(k4r3) ↗(u1)→斡(k4r3u1)
57	psts	斡(k4r3) ↗(u2)→斡(k4r3u2)
57	psts	斡(l3)(l4) ↗(u1)→斡(l3l3u1)
57	psts	斡(l3)(l4) ↗(u2)→斡(l3l3u2)
57	psts	斡(l3) ↗(u1)→斡(l3u1)
57	psts	斡(l3) ↗(u2)→斡(l3u2)
57	psts	斡(l3k1) ↗(r1)→斡(l3k1r1)
57	psts	斡(l3k1) ↗(u1)→斡(l3k1u1)
57	psts	斡(l3k1) ↗(u2)→斡(l3k1u2)
57	psts	斡(l3k1r3) ↗(u1)→斡(l3k1r3u1)
57	psts	斡(l3k1r3) ↗(u2)→斡(l3k1r3u2)
57	psts	斡(l3l3) ↗(u1)→斡(l3l3u1)
57	psts	斡(l3l3) ↗(u2)→斡(l3l3u2)
57	psts	斡(l3p1) ↗(u1)→斡(l3p1u1)
57	psts	斡(l3p1) ↗(u2)→斡(l3p1u2)
57	psts	斡(l3xx) ↗(p1)→斡(l3p1)
57	psts	斡(lh) ↗(u1)→斡(lhu1)
57	psts	斡(lh) ↗(u2)→斡(lhu2)
57	psts	斡(lhh) ↗(u1)→斡(lhhu1)
57	psts	斡(lhh) ↗(u2)→斡(lhhu2)
57	psts	斡(m1) ↗(r1)→斡(m1r1)
57	psts	斡(m1) ↗(r2)→斡(m1r2)
57	psts	斡(m1) ↗(u1)→斡(m1u1)

Table	Feature	Substitution
57	psts	$\text{ø}(m1) \rightarrow \text{ø}(m1u2)$
57	psts	$\text{ø}(m1l3) \rightarrow \text{ø}(m1l3u1)$
57	psts	$\text{ø}(m1l3) \rightarrow \text{ø}(m1l3u2)$
57	psts	$\text{ø}(m1m1) \rightarrow \text{ø}(m1m1u1)$
57	psts	$\text{ø}(m1m1) \rightarrow \text{ø}(m1m1u2)$
57	psts	$\text{ø}(m1p1) \rightarrow \text{ø}(m1p1r1)$
57	psts	$\text{ø}(m1p1) \rightarrow \text{ø}(m1p1u1)$
57	psts	$\text{ø}(m1p1) \rightarrow \text{ø}(m1p1u2)$
57	psts	$\text{ø}(m1p1r3) \rightarrow \text{ø}(m1p1r3u1)$
57	psts	$\text{ø}(m1p1r3) \rightarrow \text{ø}(m1p1r3u2)$
57	psts	$\text{ø}(m1r3) \rightarrow \text{ø}(m1r3u1)$
57	psts	$\text{ø}(m1r3) \rightarrow \text{ø}(m1r3u2)$
57	psts	$\text{ø}(n1) \rightarrow \text{ø}(n1r1)$
57	psts	$\text{ø}(n1) \rightarrow \text{ø}(n1u1)$
57	psts	$\text{ø}(n1) \rightarrow \text{ø}(n1u2)$
57	psts	$\text{ø}(n1m1) \rightarrow \text{ø}(n1m1r1)$
57	psts	$\text{ø}(n1m1) \rightarrow \text{ø}(n1m1u1)$
57	psts	$\text{ø}(n1m1) \rightarrow \text{ø}(n1m1u2)$
57	psts	$\text{ø}(n1m1r3) \rightarrow \text{ø}(n1m1r3u1)$
57	psts	$\text{ø}(n1m1r3) \rightarrow \text{ø}(n1m1r3u2)$
57	psts	$\text{ø}(n1n1) \rightarrow \text{ø}(n1n1r1)$
57	psts	$\text{ø}(n1n1) \rightarrow \text{ø}(n1n1u1)$
57	psts	$\text{ø}(n1n1) \rightarrow \text{ø}(n1n1u2)$
57	psts	$\text{ø}(n1n1r3) \rightarrow \text{ø}(n1n1r3u1)$
57	psts	$\text{ø}(n1n1r3) \rightarrow \text{ø}(n1n1r3u2)$
57	psts	$\text{ø}(n1r3) \rightarrow \text{ø}(n1r3u1)$
57	psts	$\text{ø}(n1r3) \rightarrow \text{ø}(n1r3u2)$
57	psts	$\text{ø}(n1rh) \rightarrow \text{ø}(n1rhu1)$
57	psts	$\text{ø}(n1rh) \rightarrow \text{ø}(n1rhu2)$
57	psts	$\text{ø}(n1th1) \rightarrow \text{ø}(n1th1r1)$
57	psts	$\text{ø}(n1th1) \rightarrow \text{ø}(n1th1u1)$
57	psts	$\text{ø}(n1th1) \rightarrow \text{ø}(n1th1u2)$
57	psts	$\text{ø}(n1th1r3) \rightarrow \text{ø}(n1th1r3u1)$
57	psts	$\text{ø}(n1th1r3) \rightarrow \text{ø}(n1th1r3u2)$
57	psts	$\text{ø}(n1th2) \rightarrow \text{ø}(n1th2r1)$
57	psts	$\text{ø}(n1th2) \rightarrow \text{ø}(n1th2u1)$
57	psts	$\text{ø}(n1th2) \rightarrow \text{ø}(n1th2u2)$
57	psts	$\text{ø}(n1th3) \rightarrow \text{ø}(n1th3r1)$
57	psts	$\text{ø}(n1th3) \rightarrow \text{ø}(n1th3u1)$
57	psts	$\text{ø}(n1th3) \rightarrow \text{ø}(n1th3u2)$
57	psts	$\text{ø}(n1th3r3) \rightarrow \text{ø}(n1th3r3u1)$
57	psts	$\text{ø}(n1th3r3) \rightarrow \text{ø}(n1th3r3u2)$
57	psts	$\text{ø}(n1th4) \rightarrow \text{ø}(n1th4u1)$

Table	Feature	Substitution
57	psts	ሙ(н1th4) ዕ(u2)→ሙ(н1th4u2)
57	psts	ሙ(н1th4r3) ዕ(u1)→ሙ(н1th4r3u1)
57	psts	ሙ(н1th4r3) ዕ(u2)→ሙ(н1th4r3u2)
57	psts	ሙ(ng) ዕ(u1)→ሙ(ngu1)
57	psts	ሙ(ng) ዕ(u2)→ሙ(ngu2)
57	psts	ሙ(ngk1) ዕ(r1)→ሙ(ngk1r1)
57	psts	ሙ(ngk1) ዕ(r2)→ሙ(ngk1r2)
57	psts	ሙ(ngk1) ዕ(u1)→ሙ(ngk1u1)
57	psts	ሙ(ngk1) ዕ(u2)→ሙ(ngk1u2)
57	psts	ሙ(ngk1r3) ዕ(u1)→ሙ(ngk1r3u1)
57	psts	ሙ(ngk1r3) ዕ(u2)→ሙ(ngk1r3u2)
57	psts	ሙ(ngng) ዕ(u1)→ሙ(ngngu1)
57	psts	ሙ(ngng) ዕ(u2)→ሙ(ngngu2)
57	psts	ሙ(nh) ዕ(u1)→ሙ(nhu1)
57	psts	ሙ(nh) ዕ(u2)→ሙ(nhu2)
57	psts	ሙ(nhm1) ዕ(u1)→ሙ(nhm1u1)
57	psts	ሙ(nhm1) ዕ(u2)→ሙ(nhm1u2)
57	psts	ሙ(nhnh) ዕ(u1)→ሙ(nhnhu1)
57	psts	ሙ(nhnh) ዕ(u2)→ሙ(nhnhu2)
57	psts	ሙ(nht1) ዕ(u1)→ሙ(nht1u1)
57	psts	ሙ(nht1) ዕ(u2)→ሙ(nht1u2)
57	psts	ሙ(nht1r3) ዕ(u1)→ሙ(nht1r3u1)
57	psts	ሙ(nht1r3) ዕ(u2)→ሙ(nht1r3u2)
57	psts	ሙ(nht2) ዕ(u1)→ሙ(nht2u1)
57	psts	ሙ(nht2) ዕ(u2)→ሙ(nht2u2)
57	psts	ሙ(nht3) ዕ(u1)→ሙ(nht3u1)
57	psts	ሙ(nht3) ዕ(u2)→ሙ(nht3u2)
57	psts	ሙ(nht3r3) ዕ(u1)→ሙ(nht3r3u1)
57	psts	ሙ(nht3r3) ዕ(u2)→ሙ(nht3r3u2)
57	psts	ሙ(nj) ዕ(u1)→ሙ(nju1)
57	psts	ሙ(nj) ዕ(u2)→ሙ(nju2)
57	psts	ሙ(njch1) ዕ(r1)→ሙ(njch1r1)
57	psts	ሙ(njch1) ዕ(u1)→ሙ(njch1u1)
57	psts	ሙ(njch1) ዕ(u2)→ሙ(njch1u2)
57	psts	ሙ(njch2) ዕ(u1)→ሙ(njch2u1)
57	psts	ሙ(njch2) ዕ(u2)→ሙ(njch2u2)
57	psts	ሙ(njch3) ዕ(u1)→ሙ(njch3u1)
57	psts	ሙ(njch3) ዕ(u2)→ሙ(njch3u2)
57	psts	ሙ(njn) ዕ(u1)→ሙ(njnju1)
57	psts	ሙ(njn) ዕ(u2)→ሙ(njnju2)
57	psts	ሙ(p1) ዕ(r1)→ሙ(p1r1)
57	psts	ሙ(p1) ዕ(u1)→ሙ(p1u1)
57	psts	ሙ(p1) ዕ(u2)→ሙ(p1u2)

Table	Feature	Substitution
57	psts	ኤ(ප1l3) ገ(u1)→ኤ(ප1l3u1)
57	psts	ኤ(ප1l3) ገ(u2)→ኤ(ප1l3u2)
57	psts	ኤ(ප1n1) ገ(u1)→ኤ(ප1n1u1)
57	psts	ኤ(ප1n1) ገ(u2)→ኤ(ප1n1u2)
57	psts	ኤ(ප1p1) ገ(r1)→ኤ(ප1p1r1)
57	psts	ኤ(ප1p1) ገ(u1)→ኤ(ප1p1u1)
57	psts	ኤ(ප1p1) ገ(u2)→ኤ(ප1p1u2)
57	psts	ኤ(ප1r3) ገ(u1)→ኤ(ප1r3u1)
57	psts	ኤ(ප1r3) ገ(u2)→ኤ(ප1r3u2)
57	psts	ኤ(ප2) ገ(u1)→ኤ(ප2u1)
57	psts	ኤ(ප2) ገ(u2)→ኤ(ප2u2)
57	psts	ኤ(ප2l3) ገ(u1)→ኤ(ප2l3u1)
57	psts	ኤ(ප2l3) ገ(u2)→ኤ(ප2l3u2)
57	psts	ኤ(ප2r3) ገ(u1)→ኤ(ප2r3u1)
57	psts	ኤ(ප2r3) ገ(u2)→ኤ(ප2r3u2)
57	psts	ኤ(ප3) ገ(r1)→ኤ(ප3r1)
57	psts	ኤ(ප3) ገ(u1)→ኤ(ප3u1)
57	psts	ኤ(ප3) ገ(u2)→ኤ(ප3u2)
57	psts	ኤ(ප3l3) ገ(u1)→ኤ(ප3l3u1)
57	psts	ኤ(ප3l3) ገ(u2)→ኤ(ප3l3u2)
57	psts	ኤ(ප3p3) ገ(u1)→ኤ(ප3p3u1)
57	psts	ኤ(ප3p3) ገ(u2)→ኤ(ප3p3u2)
57	psts	ኤ(ප3r3) ገ(u1)→ኤ(ප3r3u1)
57	psts	ኤ(ප3r3) ገ(u2)→ኤ(ප3r3u2)
57	psts	ኤ(ප4) ገ(r1)→ኤ(ප4r1)
57	psts	ኤ(ප4) ገ(r2)→ኤ(ප4r2)
57	psts	ኤ(ප4) ገ(u1)→ኤ(ප4u1)
57	psts	ኤ(ප4) ገ(u2)→ኤ(ප4u2)
57	psts	ኤ(ප4r3) ገ(u1)→ኤ(ප4r3u1)
57	psts	ኤ(ප4r3) ገ(u2)→ኤ(ප4r3u2)
57	psts	ኦ(r3) ገ(r1)→ኦ(r3r1)
57	psts	ኦ(r3) ገ(u1)→ኦ(r3u1)
57	psts	ኦ(r3) ገ(u2)→ኦ(r3u2)
57	psts	ኦ(rh) ገ(u1)→ኦ(rhu1)
57	psts	ኦ(rh) ገ(u2)→ኦ(rhu2)
57	psts	ኦ(rhrh) ገ(u1)→ኦ(rhrhu1)
57	psts	ኦ(rhrh) ገ(u2)→ኦ(rhrhu2)
57	psts	ኦ(рhrhr3) ገ(u1)→ኦ(рhrhr3u1)
57	psts	ኦ(рhrhr3) ገ(u2)→ኦ(рhrhr3u2)
57	psts	ኦ(s1) ገ(r1)→ኦ(s1r1)
57	psts	ኦ(s1) ገ(r2)→ኦ(s1r2)
57	psts	ኦ(s1) ገ(u1)→ኦ(s1u1)
57	psts	ኦ(s1) ገ(u2)→ኦ(s1u2)

Table	Feature	Substitution
57	psts	$\text{m}_{\text{g}}(s1k1) \downarrow(r1) \rightarrow \text{m}_{\text{g}}(s1k1r1)$
57	psts	$\text{m}_{\text{g}}(s1k1) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1k1u1)$
57	psts	$\text{m}_{\text{g}}(s1k1) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1k1u2)$
57	psts	$\text{m}_{\text{g}}(s1k1k1) \downarrow(r1) \rightarrow \text{m}_{\text{g}}(s1k1k1r1)$
57	psts	$\text{m}_{\text{g}}(s1k1k1) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1k1k1u1)$
57	psts	$\text{m}_{\text{g}}(s1k1k1) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1k1k1u2)$
57	psts	$\text{m}_{\text{g}}(s1k1k1r3) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1k1k1r3u1)$
57	psts	$\text{m}_{\text{g}}(s1k1k1r3) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1k1k1r3u2)$
57	psts	$\text{m}_{\text{g}}(s1k1r3) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1k1r3u1)$
57	psts	$\text{m}_{\text{g}}(s1k1r3) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1k1r3u2)$
57	psts	$\text{m}_{\text{g}}(s1l3) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1l3u1)$
57	psts	$\text{m}_{\text{g}}(s1l3) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1l3u2)$
57	psts	$\text{m}_{\text{g}}(s1p1) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1p1u1)$
57	psts	$\text{m}_{\text{g}}(s1p1) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1p1u2)$
57	psts	$\text{m}_{\text{g}}(s1r3) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1r3u1)$
57	psts	$\text{m}_{\text{g}}(s1r3) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1r3u2)$
57	psts	$\text{m}_{\text{g}}(s1rhrh) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1rhrhu1)$
57	psts	$\text{m}_{\text{g}}(s1rhrh) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1rhrhu2)$
57	psts	$\text{m}_{\text{g}}(s1rhrhr3) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1rhrhr3u1)$
57	psts	$\text{m}_{\text{g}}(s1rhrhr3) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1rhrhr3u2)$
57	psts	$\text{m}_{\text{g}}(s1s1) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1s1u1)$
57	psts	$\text{m}_{\text{g}}(s1s1) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1s1u2)$
57	psts	$\text{m}_{\text{g}}(s1th1) \downarrow(r1) \rightarrow \text{m}_{\text{g}}(s1th1r1)$
57	psts	$\text{m}_{\text{g}}(s1th1) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1th1u1)$
57	psts	$\text{m}_{\text{g}}(s1th1) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1th1u2)$
57	psts	$\text{m}_{\text{g}}(s1th2) \downarrow(r1) \rightarrow \text{m}_{\text{g}}(s1th2r1)$
57	psts	$\text{m}_{\text{g}}(s1th2) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(s1th2u1)$
57	psts	$\text{m}_{\text{g}}(s1th2) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(s1th2u2)$
57	psts	$\text{m}_{\text{g}}(sh) \downarrow(r1) \rightarrow \text{m}_{\text{g}}(shr1)$
57	psts	$\text{m}_{\text{g}}(sh) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(shu1)$
57	psts	$\text{m}_{\text{g}}(sh) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(shu2)$
57	psts	$\text{m}_{\text{g}}(shnh) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(shnhu1)$
57	psts	$\text{m}_{\text{g}}(shnh) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(shnhu2)$
57	psts	$\text{m}_{\text{g}}(shr3) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(shr3u1)$
57	psts	$\text{m}_{\text{g}}(shr3) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(shr3u2)$
57	psts	$\text{m}_{\text{g}}(sht1) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(sht1u1)$
57	psts	$\text{m}_{\text{g}}(sht1) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(sht1u2)$
57	psts	$\text{m}_{\text{g}}(sht2) \downarrow(u1) \rightarrow \text{m}_{\text{g}}(sht2u1)$
57	psts	$\text{m}_{\text{g}}(sht2) \downarrow(u2) \rightarrow \text{m}_{\text{g}}(sht2u2)$
57	psts	$s(t1) \downarrow(r1) \rightarrow s(t1r1)$
57	psts	$s(t1) \downarrow(r2) \rightarrow s(t1r2)$
57	psts	$s(t1) \downarrow(u1) \rightarrow s(t1u1)$

Table	Feature	Substitution
57	psts	$\omega(\text{th1th1}) \downarrow(r1) \rightarrow \underline{\omega}(\text{th1th1r1})$
57	psts	$\omega(\text{th1th1}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th1th1u1})$
57	psts	$\omega(\text{th1th1}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th1th1u2})$
57	psts	$\underline{\omega}(\text{th1th1r3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th1th1r3u1})$
57	psts	$\underline{\omega}(\text{th1th1r3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th1th1r3u2})$
57	psts	$\omega(\text{th1th2}) \downarrow(r1) \rightarrow \underline{\omega}(\text{th1th2r1})$
57	psts	$\omega(\text{th1th2}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th1th2u1})$
57	psts	$\omega(\text{th1th2}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th1th2u2})$
57	psts	$\omega(\text{th2}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th2u1})$
57	psts	$\omega(\text{th2}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th2u2})$
57	psts	$\underline{\omega}(\text{th2r3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th2r3u1})$
57	psts	$\underline{\omega}(\text{th2r3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th2r3u2})$
57	psts	$\omega(\text{th3}) \downarrow(r1) \rightarrow \underline{\omega}(\text{th3r1})$
57	psts	$\omega(\text{th3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th3u1})$
57	psts	$\omega(\text{th3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th3u2})$
57	psts	$\underline{\omega}(\text{th3r3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th3r3u1})$
57	psts	$\underline{\omega}(\text{th3r3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th3r3u2})$
57	psts	$\omega(\text{th3th3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th3th3u1})$
57	psts	$\omega(\text{th3th3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th3th3u2})$
57	psts	$\omega(\text{th3th4}) \downarrow(r1) \rightarrow \underline{\omega}(\text{th3th4r1})$
57	psts	$\omega(\text{th3th4}) \downarrow(r2) \rightarrow \underline{\omega}(\text{th3th4r2})$
57	psts	$\omega(\text{th3th4}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th3th4u1})$
57	psts	$\omega(\text{th3th4}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th3th4u2})$
57	psts	$\underline{\omega}(\text{th3th4r3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th3th4r3u1})$
57	psts	$\underline{\omega}(\text{th3th4r3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th3th4r3u2})$
57	psts	$\omega(\text{th4}) \downarrow(r1) \rightarrow \underline{\omega}(\text{th4r1})$
57	psts	$\omega(\text{th4}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th4u1})$
57	psts	$\omega(\text{th4}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th4u2})$
57	psts	$\underline{\omega}(\text{th4r3}) \downarrow(u1) \rightarrow \underline{\omega}(\text{th4r3u1})$
57	psts	$\underline{\omega}(\text{th4r3}) \downarrow(u2) \rightarrow \underline{\omega}(\text{th4r3u2})$
57	psts	$\omega(v1) \downarrow(r1) \rightarrow \underline{\omega}(v1r1)$
57	psts	$\omega(v1) \downarrow(u1) \rightarrow \underline{\omega}(v1u1)$
57	psts	$\omega(v1) \downarrow(u2) \rightarrow \underline{\omega}(v1u2)$
57	psts	$\omega(v1) \downarrow(v2) \rightarrow \underline{\omega}(v1v1)$
57	psts	$\omega(v1) \downarrow(v2) \downarrow(u1) \rightarrow \underline{\omega}(v1v1u1)$
57	psts	$\omega(v1) \downarrow(v2) \downarrow(u2) \rightarrow \underline{\omega}(v1v1u2)$
57	psts	$\underline{\omega}(v1l3) \downarrow(u1) \rightarrow \underline{\omega}(v1l3u1)$
57	psts	$\underline{\omega}(v1l3) \downarrow(u2) \rightarrow \underline{\omega}(v1l3u2)$
57	psts	$\underline{\omega}(v1r3) \downarrow(u1) \rightarrow \underline{\omega}(v1r3u1)$
57	psts	$\underline{\omega}(v1r3) \downarrow(u2) \rightarrow \underline{\omega}(v1r3u2)$
57	psts	$\underline{\omega}(v1v1) \downarrow(u1) \rightarrow \underline{\omega}(v1v1u1)$
57	psts	$\underline{\omega}(v1v1) \downarrow(u2) \rightarrow \underline{\omega}(v1v1u2)$
57	psts	$\omega(y1) \downarrow(r1) \rightarrow \underline{\omega}(y1r1)$

Table	Feature	Substitution
57	psts	$\text{ω}(y1) \downarrow(u1) \rightarrow \underline{\omega}(y1u1)$
57	psts	$\text{ω}(y1) \downarrow(u2) \rightarrow \underline{\omega}(y1u2)$
57	psts	$\text{ω}(y1) \downarrow(y2) \rightarrow \underline{\omega}(y1y1)$
57	psts	$\text{ω}(y1) \downarrow(y2) \downarrow(u1) \rightarrow \underline{\omega}(y1y1u1)$
57	psts	$\text{ω}(y1) \downarrow(y2) \downarrow(u2) \rightarrow \underline{\omega}(y1y1u2)$
57	psts	$\underline{\omega}(y1k1) \downarrow(u1) \rightarrow \underline{\omega}(y1k1u1)$
57	psts	$\underline{\omega}(y1k1) \downarrow(u2) \rightarrow \underline{\omega}(y1k1u2)$
57	psts	$\underline{\omega}(y1k1k1) \downarrow(u1) \rightarrow \underline{\omega}(y1k1k1u1)$
57	psts	$\underline{\omega}(y1k1k1) \downarrow(u2) \rightarrow \underline{\omega}(y1k1k1u2)$
57	psts	$\underline{\omega}(y1y1) \downarrow(u1) \rightarrow \underline{\omega}(y1y1u1)$
57	psts	$\underline{\omega}(y1y1) \downarrow(u2) \rightarrow \underline{\omega}(y1y1u2)$
57	psts	$\downarrow(y2) \downarrow(u1) \rightarrow \underline{\omega}(y2u1)$
57	psts	$\downarrow(y2) \downarrow(u2) \rightarrow \underline{\omega}(y2u2)$
57	psts	$\text{σ}(z1) \downarrow(r1) \rightarrow \underline{\sigma}(z1r1)$
57	psts	$\text{σ}(z1) \downarrow(u1) \rightarrow \underline{\sigma}(z1u1)$
57	psts	$\text{σ}(z1) \downarrow(u2) \rightarrow \underline{\sigma}(z1u2)$
57	psts	$\underline{\sigma}(z1ch1) \downarrow(u1) \rightarrow \underline{\sigma}(z1ch1u1)$
57	psts	$\underline{\sigma}(z1ch1) \downarrow(u2) \rightarrow \underline{\sigma}(z1ch1u2)$
57	psts	$\text{σσ}(z1ch2) \downarrow(r1) \rightarrow \text{σσ}(z1ch2r1)$
57	psts	$\text{σσ}(z1ch2) \downarrow(u1) \rightarrow \underline{\text{σσ}}(z1ch2u1)$
57	psts	$\text{σσ}(z1ch2) \downarrow(u2) \rightarrow \underline{\text{σσ}}(z1ch2u2)$
57	psts	$\text{ρ}(z1l3) \downarrow(u1) \rightarrow \underline{\text{ρ}}(z1l3u1)$
57	psts	$\text{ρ}(z1l3) \downarrow(u2) \rightarrow \underline{\text{ρ}}(z1l3u2)$
57	psts	$\text{ρ}(z1n1) \downarrow(u1) \rightarrow \underline{\text{ρ}}(z1n1u1)$
57	psts	$\text{ρ}(z1n1) \downarrow(u2) \rightarrow \underline{\text{ρ}}(z1n1u2)$
57	psts	$\text{ρ}(z1r3) \downarrow(u1) \rightarrow \underline{\text{ρ}}(z1r3u1)$
57	psts	$\text{ρ}(z1r3) \downarrow(u2) \rightarrow \underline{\text{ρ}}(z1r3u2)$
57	psts	$\text{ρ}(z1z1) \downarrow(u1) \rightarrow \underline{\text{ρ}}(z1z1u1)$
57	psts	$\text{ρ}(z1z1) \downarrow(u2) \rightarrow \underline{\text{ρ}}(z1z1u2)$
57	psts	$\text{φ}(zh) \downarrow(u1) \rightarrow \underline{\text{φ}}(zhu1)$
57	psts	$\text{φ}(zh) \downarrow(u2) \rightarrow \underline{\text{φ}}(zhu2)$
57	psts	$\text{φ}(zhch1) \downarrow(u1) \rightarrow \underline{\text{φ}}(zhch1u1)$
57	psts	$\text{φ}(zhch1) \downarrow(u2) \rightarrow \underline{\text{φ}}(zhch1u2)$
57	psts	$\text{φ}(zhk1) \downarrow(u1) \rightarrow \underline{\text{φ}}(zhk1u1)$
57	psts	$\text{φ}(zhk1) \downarrow(u2) \rightarrow \underline{\text{φ}}(zhk1u2)$
58	salt	$\text{χ}(ch1ch1) \rightarrow \underline{\text{χ}}(ch1ch1), \underline{\text{χ}}(ch1ch1.alt1)$
58	salt	$\text{χ}(ch1ch1u1) \rightarrow \underline{\text{χ}}(ch1ch1u1), \underline{\text{χ}}(ch1ch1u1.alt1)$
58	salt	$\text{χ}(ch1ch1u2) \rightarrow \underline{\text{χ}}(ch1ch1u2), \underline{\text{χ}}(ch1ch1u2.alt1)$
58	salt	$\text{χ}(k1u2) \rightarrow \underline{\text{χ}}(k1u2), \underline{\text{χ}}(k1u2.alt1)$
58	salt	$\text{χχ}(lhjh) \rightarrow \underline{\text{χχ}}(lhjh), \underline{\text{χχ}}(lhjh.alt1)$
58	salt	$\text{χχ}(lhlhu1) \rightarrow \underline{\text{χχ}}(lhlhu1), \underline{\text{χχ}}(lhlhu1.alt1)$
58	salt	$\text{χχ}(lhlhu2) \rightarrow \underline{\text{χχ}}(lhlhu1), \underline{\text{χχ}}(lhlhu2.alt1)$

നന്ദി

ഈ സംരംഭത്തിന് സാമ്പത്തികസഹായം നൽകിയ കേരള ഭാഷാ ഇൻസ്റ്റിറ്റുട്ടിന് നന്ദി രേഖപ്പെച്ച കുള്ളുത്തമാണ്. മുൻപു വിവിധ ഘട്ടങ്ങളിൽ അഭിപ്രായങ്ങളും നിർദ്ദേശങ്ങളും നൽകിയ സൗഹ്യ ത്വക്കലെയും നന്ദിപൂർവ്വം സ്വർക്കുന്നു.

റിപ്പോർട്ട് തയ്യാറാക്കിയത്

ബിനോയ് ഡൊമീനിക്, കാവു മനോഹർ, സന്തോഷ് തോട്ടിങ്ങൽ