

Tasdawit Abderrahman Mira n Bgayet

Tamezdayt n Tsekliwin d Tutlayin

Tasga n Tutlayt d Yidles n Tmaziyt

Tazrawt n Master

Tarakalt tamutlayt

Asentel

***Asmeskel n umyag aherfi at krađ n
tergalin gar At Mangellat d snat n
temnađin (Tazmalt, Burğ Mira)***

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Abuddu

Ad buddey leqqdic-a:

- ❖ I yemma ezizen ad itewwel Rebbi deg leemer-is.
- ❖ I rruḥ n baba ezizen.
- ❖ I yessetma: Saliḥa, Nadiya, Hinda d urgaz-is.
- ❖ I wayetma Karim d Muḥend
- ❖ I yessetma d warraw-nsen d yirgazen-nsent.
- ❖ I wayetma d tlawin-nsen d warraw-nsen.
- ❖ I setti ezizen ttmenniḡ-as teḡzi n leemer.
- ❖ I xali d tmeṭṭut-is d warraw-nsen
- ❖ I xwalti d twaculin-nsent.
- ❖ I lḡiran-iw yal yiwen s yisem-is laḡya Faḡila
- ❖ I temduk-al-iw yal yiwet s yisem-is
- ❖ I temdakelt-iw Siham i d yellan ḡer yidis-iw seg tazwara almi d taggara

Karima

Abuddu

Ad buddey leqdic-a :

- ❖ I tgejdit n uxxam-nney, yemma ezizen, yerwan lmeḥna d wurfan i wakken ad naweḍ yer yiswi-nney.
- ❖ I baba ezizen i yerwan aezzer d ubekker akken ad ay-d-irebbi s læzz d lḥerma.
- ❖ I yessetma d warraw-nsent d yirgazen-nsent.
- ❖ I watmaten-iw d tlawin-nsen.
- ❖ I warraw n gma.
- ❖ I Amal d Fulla.
- ❖ I yaya i wumi ttmenniḡ-as teḡzi n leemer.
- ❖ I rruḥ n yaya Messaæd.
- ❖ I urgaz-iw Sufyan.
- ❖ I temduk-al-iw yal yiwet s yisem-is laḡya Karima i d-yellan yer yidisan-iw.

Siham

asnemmer

Deg tazwara ad as-nini tanemmirt tameqqrant i mass HAMEK Brahim i d-yezgan i lmendad n leqdic-a alami d taggara.

Tanemmirt i yimsulya-ntey.

Tanemmirt i yal yiwen i day-d-yefkan afus n tallelt ulamma s wawal.

Karima d Siham

Agbur

Tazwert tamatut	10
Aħric n tesnarrayt	13
1.Asissen n usentel	13
2. Afran n usentel.....	13
3. Afran n unnar	13
4. Afran n yimsulya	14
5. Ammud	14
6. Tarrayt n tsastant deg unnar	14
7. Tarrayt n tesleđt	15
Aħric azrayan	17
1. Amyag.....	17
1.1. Ticrađ tigejdanin.....	17
1.1.1. Ađar	17
1.1.2. Askim	17
1.1.3. Amatar udmawan	18
1.1.4. Ticrađ n tmezri	19
1.2. Ticrađ timazzayin	20
1.2.1. Tizelyiwin send amyag.....	20
1.2.2. Tizelyiwin n tnilla	20
1.2.3. Imqimen iwsilen n umyag	20
1.2.4. Ticrađ tisuddimin	21
1.2.4.1. Asway	21
1.2.4.2. Amyay	21
1.2.4.3. Attway	21
1.3. Timezra	21
1.3.1. Ummid.....	23

1.3.2. Arummid.....	23
3.1. Asbadu n yal timezra	23
3.1.1. Imizri	23
3.1.2. Imizri ibaw	24
3.1.3. Urmir	24
3.1.4. Urmir ussid	25
3.1.5. Anađ.....	25
3.2. Amqabal gar tmezra	26
3.2.1. Urmir ~ Imizri	26
3.2.2. Urmir ~ Urmir ussid	26
2. Tasnantala	27
1. Tutlayt	27
2. Tantala	27
3. Tameslayt	27
4. Tasentala n tmaziyt	28
4.1. Tamuyli yef umezruy n tsentala n tmaziyt s umata akked tutlayt tantala yerzan kan taqbaylit.....	28
5. Asismel n tantaliwin n tmaziyt	30
5.1. Asismel yebnan yef wazalen n umezruy	31
5.1.1. Asismel n tsekla n umezruy n waεraben	31
5.1.1.1. Asismel n Ibn khaldoun	31
5.1.1.2. Asismel n R. Basset	31

5.1.2. Asismel ibedden yef yiferdisen n tesnilest	32
5.1.2.1. Asismel n R. Basset	32
5.1.2.2. Asismel n E. Destaing	33
5.1.2.3. Asismel n A. Willms	33
5.1.2.4. Asismel n A. Akhenvald	35
5.1.2.5. Asismel n O. Durand	35
5.1.2.6. Asismel n Mouhad Akli hadadou	36
5.1.2.7. Asismel n Kamal Naît-Zerrad.....	37
Aħric n tesleđt	40
1. Talıwın n yımyagen iħerfiyen bu krađ n tergalin deg usegzawal n J. M. Dallet d userwes-nsen yer temnađın-nniđen (Tazmalt d Burğ Mira)	40
2. Abeddel deg tmezra	48
2.1. Aæeddi seg umyag aħerfi yer yimizri d yimizri ibaw	48
2.2. Aæeddi seg umyag aħerfi yer urmir d urmir ussid	58
3. Iğmađ	73
Taggrayt tamatut.....	76
Adlismuy	78
Ammud	81
Amawal	154

Isegzal

(At M): At Mangellat

(T): Tazmalt

(BM): Burğ Mira

Md: amedya

r: targalt

sb: asebtar

Izamulen

Ø: talya tilemt

→: yettuyal

/: ulac

~: tanmegla

Tazwart tamatut

Tazwert

Tamaziyt d tutlayt i yesəan azayer deg ugafa n Tefriqt sumata. Lezzayer d tamurt gar tmura n umaḍal deg ara naf tutlayt-a tettneri cwiṭ cwiṭ deg yal tantala. Taqbaylit tebḍa yef waṭas n tmeslayin acku yal tama amek tettmeslay, nettaf tamgirda mi ara ad nəeddi seg temnaḍt yer tayed.

Tazrawt ara nexdem terza tasnalya n umyag aḥerfi bu kraḍ n tergalin i d-nekkes seg usegzawal n J. M. Dallet, i d-yewwin yef tmeslayt n At Mangellat d userwes-is akked snat n temnaḍin-nniḍen i d-nefren deg tmurt n Leqbayel Tazmalt akked Burğ Mira.

Tamukrist

Iswi agejdan n tezrawt-nney d askan n usmeskel yerzan amyag aḥerfi bu kraḍ n tergalin gar At Mangellat d snat n temnaḍin Tazmalt d Burğ Mira, yef wannect-a ad neered ad d-nefk kra n yisteqsiyen igejdanen:

1. Anda i d-yettili umgired-a?
2. Amek i yettbeddil ufeggag n umyag-a seg tmezra yer tayed deg At Mangellat d temnaḍin i nefren?

Turdiwin

1. Yettili-d usmeskel deg umyag aḥerfi bu kraḍ n tergalin mi ara nəeddi seg temnaḍt yer tayed.
2. yettili-d umgired d ubeddel n ufeggag n umyag aḥerfi deg yiswiren n tutlayt am temsislit d tesnalya.

Tazrawt-nney nebḍa-tt yef kraḍ n yihricen, aḥric amezwaru d tasnarrayt, deg-s newwi-d awal yef tmental n ufran n usentel akked yimsulya d unnar n unadi, syin akin nemmeslay-d yef tarrayt i nesseqdec akken ad d-negmer asagem. Aḥric wis sin d win n tezri anda i d-nemmeslay akk yef wayen yerzan asentel n umyag aḥerfi s umata, ama d ticraḍ-is tigejdanin ama d

tisuddimin, ama d timezra d umqabal gar-asen. Syin akin newwi-d awal yef tesnantala n tmaziyt d usismel n tantaliwin-is, ma d taggara d tasleqt i wayen i d-negmer seg unnar n tsasant d userwes-is yer At Mangellat deg kra n yiswiren n tutlayt am temsislit d tesnalya.

Ahric n tesnarayt

1. Asissen n usentel

Tazrawt-a d tin yerzan aserwes n umyag aħerfi bu krađ n tergalin gar At Mangellat d snat n temnađin-nniđen Tazmalt akked Burđ Mira. Ad neered ad d- nessebgen amgired yellan seg temnađin-a deg wayen yerzan amyag aħerfi d yifeggagen-is deg uswir n temsislit, talya.

2. Afran n usentel

Gar wayen i d ay-yewwin ad d-nefren asental-a d tamgirda yellan gar tmeslayin n teqbaylit yettemxalafen seg temnađt yer tayed, nefren-it acku ar ass-a mazal xusent tezrawin i d-yewwin yef usentel-a.

3. Afran n unnar

Akken ad neg tazrawt-nney i yerzan asmeskel n umyag aħerfi at krađ n tergalin nefren-d snat n temnađin Tazmalt akked Burđ Mira, acku yella umgired meqqren ger-asant.

Tazmalt d tin i d-yezgan deg unzul amalu n lwilaya n Bgayet, tebced yef tneggarut-a s 80 KM, ħesben-tt d tayremt tameqqrant deg uzayar n Ğerđer. Zzint-as-d kra n tyiwanin, seg umalu Cerfa yettabaen llwilaya n Tubiret, seg ugafa d adrar n At Mlikec, seg usamar Akbu, seg unzul Bujlil, ma yella d amđan n yimezday-is d win yewwđen yer 40 000.¹

Burđ Mira ney taskeryut d tin i d-yezgan deg unzul asamar n Bgayet, tebced yef tneggarut-a s 50 KM, zzint-as-d kra n tyiwanin, seg umalu At Smaeel, seg ugafa Uqas, seg usamar Dergina, seg unzul Xerrata, ma yella d amđan n yimezday-is d win yewwđen yer 35 000.²

Llant atas n tmental i d ay-yeđđan ad d-nefren timnađin-a, ad d-nebder kra deg-sent:

- Timuyliwin i nesca yakan yef tmeslayin-a, mi ara nettmeslay d yinelmaden n tesdawit n Bgayet netthulfu-d s temgirda yellan gar-asant.

¹ Newwi-t-id seg tyiwant n yal tamnađt

²

- Afus n tallelt d tebyest i day-d-fkan kra n yimdanen n temnađin-a yessafsen leqdic-nney deg unnar.

4. Afran n yimsulya

Deg uxeddim-a nesmenyif imsulya yellan tadra-nsen deg temnađin yettwazerwen, ad seun deg leemer-nsen nnig n 35 n yiseggasen, imi d imeqqranen i yettmeslayen tutlayt tayemmat, am wakken i nefren tulawin ur neyri ara ttyamant deg uxxam ur ttmeslayent ara tutlayt-nniđen. Rnu yef waya, ma nemmuqel yer kra n yimyagen ad ten-naf d imyagen i mazal ttwaseqdacen tura, d ayen i d ay-yeğġan ad nesseqsi tikwal ilemziyen.

Tafelwit n yimsulya

Isem	Leemer	Tuzzuft	Taddart	Tayiwant
K. Malika	60 n yiseggasen	tawtemt	Tineswin	Tazmalt
F. Nwara	78 n yiseggasen	tawtemt	Mirlu	Tazmalt
B. Amal	30 n yiseggasen	tawtemt	Tiwririn	Tazmalt
S. Fadila	42 n yiseggasen	tawtemt	At eli umhend	Taskeryut
H. Kahina	25 n yiseggasen	tawtemt	At eli umhend	Taskeryut
D. Hayat	50 n yiseggasen	tawtemt	At eli umhend	Taskeryut

5. Ammud

Ammud d win i d-nekkes seg usegzawal n Jean Marie Dallet, asegzawal-a d asentlay taqbaylit-tafransist, yettwaxdem yef tmeslayt n At Mangellat, yeffey-d deg useggas n 1982 s ufus n kra n yimussnilsen deg tizrigin SELAF, yesea 1050 n yisebtar, deg-s yessasmel awalen ilmend n uzar.

Deg tazwara nekkes-d akk imyagen iherfiyen bu krađ n tergalin akked yifeggagen-nsen yimizri d ibaw, urmir d ussid, nerna-d asebtar-nsen deg Dallet d unamek-nsen s tefransist.

6. Tarrayt n tsastant deg unnar

Ammud n tsastant-nney yerza imyagen iherfiyen n krađ n tergalin n J. M. Dallet s yes i neffey yer unnar, iswi-nney d anadi yef wayen i ten-id- yettqabalen deg yal tamnađt. Mi i neffey yer unnar newwi ammud i yesaan 1048 n yimyagen iherfiyen, syin akkin nennuda-d yef kra n yimsulya i wumi nettak isteqsiiyen.

Ad asen-nefk amyag ad ten-nesseqsi ma qqaren-t, dacu id anamek-is yur-sen, ma yella ur teqqaren ara ad asen-nessefhem anamek n umyag-nni ney ad nger amyag-nni deg tefyirt nutni ad ay-d-inin amek i teqqaren, syin akkin ad asen-nessefhem amek ara ay-d-sseftin imyagen-a.

7. Tarrayt n tesleđt

Mi i nfuk agmar n wammud seg unnar n tsasant, nebda leqdic n tesleđt anda yal amyag bu krađ n tergalin nexdem-as talya-s syin akkin nesserwes talıwin n umyag aħerfi yer tid n temnađin-nniđen. Syin akkin needda yer yifeggagen n yal talya nenna-d amek i yettbeddil seg tmezra yer tayed, syin nesserwes yal talya n tmezra n At Mangellat yer temnađt-nniđen anda i d-nefka asmeskel.

Yer taggara nura-d imyagen i ibedden anamek deg yal tamnadt, nura-d diy imyagen i d-nera seg temnađin ulac-iten yer Dallet.

Ahric azrayan

1.amyag

Amyag d win yeddsen s usdukel n umatar udmawan d uẓar amawalan d uskim n tmezri, ineggura-ya d nutni i d-yettaken afeggag.

Ƣef waya yenna-d S. CHAKER: « Amyag deg tmaziyt yettwasbadu-d s zeddi amaran n uẓar amawalan i yesean anagar tirgalin, d tecreḍt n tmezri[...], d umatar udmawan. »³

Seg tama-s, K. NAÏT ZERRAD yerna-d: « Amyag deg teqbaylit yettwaseftay ilmend n tewsit, amḍan d wudmawen. »⁴

1.1.Ticraḍ tigejdanin

D ticraḍ i d-yeskanayen amyag ur yezmir ara ad yili ma ur tent-yesɛi ara, ticraḍ-a mmalent-d win igan tigawt d melmi i teḍra.

Amyag yesɛa imataren d ufeggag, aneggaru-a yebḍa yef sin aẓar(tirgalin) tiyra.

Afeggag yesɛa aẓar(tirgalin) + tiyra: aẓar yemmal-d anamek, tiyra mmalent-d timezri.

1.1.1.Aẓar

D tirgalin i yellan d ul n umyag, yenna-d K. NAÏT ZERRAD: « Aẓar deg-s yiwet ney ugar n tergalin yesean anamek»⁵

1.1.2. Askim

Yebna yef tergalin d teyra i d-yemmalen timezri n umyag ma temmed ney uread temmid.

³ Chaker (S.), 1991: 124 «Le verbe berbère est défini par l'association obligatoire d'une racine lexicale composé uniquement de consonnes, d'une marque aspectuelle [...], et un indice de personne.»

⁴ Naït zerrad (K.), 1995: 71 «Le verbe kabyle se conjugue en genre, nombre et personne.»

⁵Naït zerrad (K.), 1995: 15 «La racine comporte une consonne ou plusieurs consonnes porteuses de sens.»

1.1.3. Amatar udmawan

Amatar udmawan d ayen i d-yessebganen win igan tigawt, nezmer ad ten-nebdu ilmend:

- Umđan: Asget/ asuf .
- taywalt: win yettmeslayen/ win i wumi nettmeslay/ win i yef nettmeslay.

Nezmer ad nebdu imataren udmawanen ilmend n talya-nsen yef krađ n yiħricen :

- Deg tazwara: (azwir): y/i—, t—, n—.
Md: **ibubb, tbubb, nbubb**
- Deg taggara: (Adfir): —y, —n, —nt .
Md: **bubbey, bubben, bubbent**
- Talya tugzimt: Aħric ad yili deg tazwara, aħric deg taggara:
t—đ, t—m, t—mt.
Md: **tbubbeđ, tbubbem, tbubbemt**

yef yimataren udmawanen yenna-d M. MAMMERI: «Sseftayen medden s tmerna n yiwsilen:

-Sdat n ufeggag, deg wudem wis 3 asuf : Izmer, u1 asget : Nezmer.

-deffir n ufeggag, deg wudem 1 asuf: zemrey, wis 3 asget: zemren.

-sdat ney deffir n ufeggag, deg wudem wis 2 asuf: tzemređ, ney asget: tzemrem»⁶

Deg unamek-a, yenna-d Sadaq BENDALI: «Amatar udmawan d isekkilen i d-irennun deg tseftit, deg tazwara d taggara n umyag ; yemmal-d anwa udem yer wacu i yefti umyag.»⁷

⁶ Mammeri (M), 1990 : 63 «Sseftayen medden s tmerna yyewsilen :
-Zdat ufeggag, deggudem wis 3 asuf : i-zmer, 1u asgwet : n-ezmer,
-Deffir ufeggag , deggudem 1 u asuf : zemr-ey, w3 asgwet : zemr-en,
-Zdat wala deffir ufeggag , deggudem w2 asuf : t-zemr-eđ wal-asgwet : t-zemr-em. »

Ihi yer taggara ad naff:

Talya tamyagant = azar amawalan + askim + amatar udmawan.

1.1.4. ticrađ n tmezri

D ticrađ i d-yemmalen timezri n umyag-nni ma yella temmed ney ur temmid ara, ma d tilawt ney d tibawt...

Ad naf amyag deg tmaziyt ifetti ilmend n tmezri, mačči ilmend n wakkud am tutlayin-nniđen yecban tafransist d tegnizit ...

Deg usbaddu-ines i tecrađ n tmezri Fatima Sadiqi tenna-d: «d leqwaleb ijerrumanen i deg i kečmen yizuran i waken ad d-ffiyent talwiwin i yezdin yer taggayin tisanlyanin yemgaraden»⁸

Deg unamek-a yenna-d K. NAIT-ZERRAD: «imyagen akk ama d iherfiyen ney d isuddimen, sean ukuz n yisental: urmir, urmir ussid, izri, izri ibaw. »⁹

Md: yura: u—a → d ticređt n yizri ilaw.

Ur yuri: u—i → d ticređt n yizri iba

Ad yaru: a— → d ticređt n urmi

Yettaru: tt— → d ticređt n urmir ussid

⁷ Bendali (S.), 2007: 39 «Amatar udmawan d isekkilen i d-irennun, di tseftit, di tazwara d taggara n wemyag; yemmal-d anwa udem wiyer yefti wemyag.»

⁸ Sadiqi (F.), 1997 : 81 «*Se sont des «moules» grammaticaux dans lesquels les racines sont encastrées pour dérivé des formes appartenant à des catégories syntaxique données.*»

⁹ Nait-Zerrad (K.), 1995 : 16 «*Tout verbes (primaire ou dérivé possède quatre thème : l'aoriste, l'aoriste intensif, le prétérit et le prétérit négatif.*»

1.2. Ticrađ timazzayin

Ticrađ timazzayin n umyag d tid i d-irennun i umyag, ticrađ-a ur llint ara d tigejdanin imi d timerniwt i tent-nrennu, zemrent ad zwirent ney ad deffrent amyag.

1.2.1 tizelyiwin send amyag (tizelyiwin n urmir d urmir ussid)

Ttilint sdat n umyag, nrennu-tent i urmir d urmir ussid, llant snat: (ad, la).

Ad: yettili s talya-a:

Md: ad yeqqim, ad yurar

Maca tettili dayen s talya (a) d (ara)

La: yettili s talya-a kan (la), amkan-is sdat n urmir ussid d amiran.

Md: la yettaru.

1.2.2. Tizelyiwin n tnila (d, n)

D tizelyiwin i d-irennun yer umyag, mmalent-d sani i terra tigawt, ma yer win yettmeslayen ney yer win i wumi nettmeslay.

D: temmal-d tanila n tigawt yer win yettmeslayen (amkan anida yella)

Md: terzef-d

N: temmal-d tanila n tigawt yer win i wumi nettmeslay.

Md: terzef-n.

1.2.3. Imqimen iwsilen n umyag

Ttetťfen amkan n yisemmaden, zemren ad ilin sdat ney deffir n umyag

Imqimen iwsilen n umyag bđan yef sin:

Amđan	Udem	Awsil n wumyag arusrid	Awsil n wumyag usrid
asuf	1.	-yi	(i)yi
	2. m.	-ak	-(i)k
	nt.	-am	-(i)kem
	3. m.	-as	-(i)t
	nt.	-as	-(i)t
Asget	1.m.	-ay ;aney	-ay ;aney
	nt.	-ay ;aney	-ay ;aney
	2.m.	-awen	-(i)kwen
	nt.	-akwent	-(i)kwent
	3.m.	-asen	-(i)ten
	nt.	-asent	-(i)tent

1.2.4Ticrađ tisuddimin

D amyag aħerfi i wumi ara nernu ticrađ n usuddem, llant krađet n talıwin:
Asway, attway akked umyay.

Deg usatal-a, yenna-d K NAIT ZERRAD: «Amyag yezmer ad yesεu isuddimen am usway, attway, amyay, ney d tadukli n talıwin-a tineggura. Sean taseftit am tin n yimyagen iħerfiyen.»¹⁰

Ma yella d M MAMMERI yenna-d: «Zyada yef talya taħerfit, nezmer ad naf krađet n talıwin tisuddimin, i d-yemmugen s usezwer n tergalin i ufeggag.»¹¹

¹⁰Nait Zerrad (K.), 1995 : 72 «Un verbe peut avoir des dérivés exprimant le factitif, le passif, le réciproque ou une combinaison des formes précédentes. Ils ont une conjugaison identique au verbe simple ou primaire.»

¹¹Mammeri (M.), 1992 : 59 «En plus de la forme simple, on peut avoir trois formes dérivées, obtenues par préfixation de consonnes au radical.»

1.2.4.1 Asway

Asway d yiwet seg talɣiwin n umyag asuddim, yettili-d s tmerna n uzwir «s—» neɣ yiwen seg yimcalayen-is i usentel.

Deg wayen yerzan amcalay-a, M MAMMERI yenna-d: « Deg talɣa n usway irennu «s» sdat n umyag :- «s» awezzlan : Kcem, sekcem. - « s » ayezfan : Ali , ssali.»¹²

Md: dukel → sdukel

1.2.4.2 Amyay

Amyay d yiwet seg talɣiwin n umyag asuddim, yettili-d s tmerna n uzwir «my» neɣ yiwen seg yimcalayen-is i ufeggag.

Md : issin → myussan

1.2.4.3 Attway

Attway d yiwet seg talɣiwin n umyag asuddim, yettili-d s tmerna n uzwir «ttwa—», neɣ yiwen seg yimcalayen-is, i ufeggag anemyag.

Md: fhem → ttwafham

1.3. Timezra

Anagrah n tseftit n yimyagen deg tmaziɣt yebna ɣef tmezri, mačči ilmend n wakud am kra n tutlayin-nniɣen yecban tafransist, tagnizit. Imi ulac akud deg talɣa n yimyagen deg tmaziɣt, maca tettarra tamawt ɣer tigawt-nni s timmad-is, ma yella temmed neɣ ur temmid ara. ɢef waya ad naf llant snat n tmezra, yal yiwet seg-sent tebɗa ɣef sin, snat d tummidin, snat-nniɣen d tirummidin.

Izri d yizri ibaw d tummidin.

¹²Mammeri (M), 1992 : 70 «Di talɣa wwešsway irennu « ss » zdat umyag :- « s » agwezzlan:kcem, sekcem.- « s » ayezfan:ali,ssali.»

Urmir d wurmir ussid d tirummidin.

1.3.1 Ummid

Deg-s tigawt temmed, anamek n waya, tigawt teḍra deg yizri rnu yer waya tfukk.

Deg unamek n wummid, F SADIQI tenna-d: «Am wakken i t-id-yemmal yisem-is, ummid yemmal-d dakken tigawt ney tadyant i d-yewwi umyag temmed ney tfukk.»¹³

1.3.2. Arummid

Deg-s tigawt ur temmid ara, tezmer ad tili tebda maca ur tfukk ara, d tanumi, ney mazal ur tebdi, ad teḍru yer sdat.

Ma yella deg wayen yerzan arummid, F SADIQI tenna-d: «Am wakken i t-id-yemmal yisem-is, arummid yemmal-d dakken tigawt ney tadyant i d-yewwi umyag ur tfukk ara.»¹⁴

3.1. Asbadu n yal timezra

3.1.1. Imizri

D yiwet seg tmezra yellan deg tmaziyt, tigawt deg-s tebda deg yizri, tfukk deg yizri, tigawt deg-s temmed.

Md: yeḥrec, teḥrez

Deg unamek-a, Sadaq BENDALI yenna-d : «Izri d timezri yemmalen ayen yeḍran, yezrin, ifukken.»¹⁵

¹³Sadiqi (F.), 1997 :85 «Comme son nom l'indique l'accompli signifie que l'action, ou l'événement exprimé par le verbe, est accompli ou terminé.»

¹⁴ Sadiqi (F.), 1997 :86 :«Comme son nom l'indique, l'inaccompli signifie que l'action ou l'événement exprimé par le verbe n'est pas terminé.»

¹⁵Bendali (S.), 2007 : 116 «Izri d timezri yemmalen ayen yeḍran,yezrin,ifukken.»

3.1.2. Imizri ibaw

D yiwet seg kużet n tmezra n tmaziyt. Deg unamek, ur temgarad ara yef yizri ilaw, maca deg talya, afeggag n yizri ibaw yemgarad yef win n yizri ilaw, d ayen i yeğğan kra n yimusnilsen ggaren-t deg yizri, am wakken d tawsit ney d talya kan deg-s.

Deg unamek n tmezri-ya, yenna-d Sadaq Bendali: «Talya tibawt terza tigawt ur neđri, ur nderru, ney ayen ur nelli ur nettili.»¹⁶

Md: ur yejbir ara

Ur yeħsil ara

Deg wayen yerzan asiley n yizri ibaw, M. MAMMERI yenna-d : «Deg yizri ibaw, atas n yimyagen i iseεεun «i» deg tuntiqt taneggarut.»¹⁷

Deg unamek-a n usiley, yenna-d K. NAIT ZERRAD: «Talya tibawt tettmaga s tzelyiwin «ur» d «ara»: Ur + afeggag n yizri ibaw + ara.»¹⁸

3.1.3. Urmir

Yemmal-d tigawt ur nemmid ara, mazal ur tfuk ara ney ad teđru yer sdat, yettili s tmerna n tzelya «ad» ney war tazelya yer tazwara n umyag aħerfi.

Deg unamek-a, yenna-d Sadaq Bendali: « Urmir d timezri yemmalen tigawt taħerfit. Akud ideg tderru temmal-it tegzi n tefyirt ideg yella umyag.Amyag yezmer ad yili s tzelya ney war tazelya.»¹⁹

Md1: wid ilan tazelya n urmir:

Ad yejmeε, ad yeħrec.

¹⁶ Bendali (S.), 2007: 116 «Talya tibawt terza tigawt ur neđri,ur nderru,ney ayen ur nelli ur nettili.»

¹⁷ Mammeri (M.), 1990 :48 «Au prétérit négatif beaucoup de verbes prennent un «i» dans la dernière syllabe.»

¹⁸ Nait Zerrad (K.), 1995 :85 «La forme négative s'obtient à l'aide des particules «ur» et «ara» : Ur + thème de prétérit négatif + ara.»

¹⁹ Bendali (S.), 2007: 117 «Urmir d timezri yemmalen tigawt taħerfit. Akud ideg tderru temmal-it tegzi n tefyirt ideg yella wemyag.Amyag yezmer ad yili s tzelya ney war tazelya.»

Deg unamek n yimyagen-a, M. MAMMERI yenna-d: «Talya n yimal d tin n wurmir i wumi yezwar «ad» [...]. »²⁰

Md2: wid ur nelli tazelya n wurmir:

Yečča ney yeqqim kif kif.

K. NAIT ZERRAD day, seg tama-s, yenna-d: «Afeggag n wurmir ixus wanda i d-yettas iman-is. Dima iteddu d uzwiramyag (tazelya i izeggiren amyag) ad, d tadukkli i d- yesbanayen imal ney asirem. Atg»²¹

3.1.4. Urmir ussid

D timezri tis kużet deg tmaziyt, temmal-d ayen yebdan mazal yettkemmil, d tigawt ur nemmid, tezmer day tmezri-ya ad d-temmel ayen yellan d tanumi.

K. Nait Zerrad yenna-d: «Urmir ussid yettwasemres i wakken ad d-yesbin tigawt n tnumi, yettalsen, yezzifen ney d tamirant.»²²

talya n wurmir ussid, yenna-d M. MAMMERI: «Ussid yettili iman-is, ney ilekkem yiwet seg tzelyiwin-a: -Ad : Ad izegger asif kul ass. -La : La yettaru tabrat. -Ar : Ar yettsubbu yettali.»²³

3.1.5. Anađ

Anađ nessemras-it mi ara ad s-nini i ħedd ad yexdem kra, ur yettwaseftay ara ilmend n wudmawen akken ma llan, maca anađ yettili kan deg wudem wis sin, ama deg wasuf ney deg usget, ama deg umalay ney deg unti

Yenna-d S. Bendali yef wanađ :«anađ yemmal asendeh (tasunđa) yef tigawt taħerfit»²⁴

²⁰ Mammeri (M.), 1990 : 64 «Talya yyimal t-tin wwurmir iwumi yezwar «ad»[...]»

²¹ Naït-Zerrad (K.), 1995 : 74 «Le thème d'aoriste est rarement utilisé seul. Il est souvent accompagné du préverbe (ou particule préverbale) ad, combinaison qui exprime le futur le souhait, etc.»

²² Naït-Zerrad (K.), 1995 : 75 «L'aoriste intensif est utilisé pour indiquer une action habituelle, répétitive, prolongée ou actuelle.»

²³ Mammeri (M), 1990:70 «Ussid iħħili weħdes ney ilekkem yiwet di tzelyiwin a:

-Ad: ad izegger asif kullas.

-La : la iħħaru tabrať.

-Ar : ar iħħubbu yettali.»

3.2. amqabal ger tmezra

Amqabal ger tmezra deg umyag n tmaziyt yerza talya d unamek, yettili ger :

Urmir d imizri, urmir d urmir ussid.

3.2.1. Urmir ~ imizri

Tikwal yettili umqabal tikwal ulac-it, acku llan kra n yimyagen ur tettbeddil ara talya-nsen, afeggag n wurmir d win n yizri yiwen-is, i sin yid-sen d talyiwin tiruciḍin.

Deg unamek n waya, i d-yenna K.Nait-Zerrad: «imyagen ur nettbeddil ara: d imyagen i yesεan urmir d yimizri kif kif-iten.»²⁵

Md: Urmir: (ad) ilumm, imizri: ilumm

Llan ifeggagen anda tettemgarad talya-nsen, yettban-d ubeddel-a deg teyra.

yef waya yenna-d K. Nait Zerrad: «imyagen i yettbeddilen: deg wayen yerzan imyagen-a, urmir yemgarad yef yimizri, aya yettban-d deg ubeddel n yiwet ney n snat n teyra.»²⁶

Md: urmir: (ad) ibibb, imizri: ibubb

3.2.2. Urmir~ urmir ussid

Urmir ussid talya-s dima d tucridt, tebna yef tin n wurmir, afeggag-is yemgarad yef win n wurmir, abeddel-nni yettili-d ilmend n taggayt n umyag.

²⁴Bendali (S), 2007 : 36 «*anaḍ yemmal asendeh (tasunḍa) yef tigawt taḥerfit*»

²⁵Naït-Zerrad (K.), 1995 : 40 «*Les verbes réguliers : ce sont les verbes ayant l'aoriste identique au prétérit.*»

²⁶Naït-Zerrad (K.), 1995 : 41 «*Les verbes irréguliers : pour ces verbes, l'aoriste est différent du prétérit. Cela se traduit par l'alternance d'une ou de deux voyelles.*»

2.tasnantala

1.Tutlayt

J. Dubois yettwali tutlayt deg unamek amatu am wakken d allal n taywalt, ney d agraw n yizamulen n kra n yimsiwal n kra n temyiwant.

Nettmeslay yef tutlayt tayemmat tin ad naf ttmeslayent imezday inasliyen n kra n wadeg, ħerzen-tt imi lemden-tt segmi llan d imezyanen. Tutlayin timuddirin d tutlayin i yettuseqdacen imira ama deg taywalt timawit ama deg tira, maca tutlayin yemmuten d isem-nsent i d awal-nsent ur ttwaseqdacent ara ama deg timawit ama deg tira, maca yettyima-d sumata later-nsent ama d idrisen n tsekla ama d ittaftaren iqburen...am wayen iy-d-teġġa tlatinit akked tegrit.

2. Tantala

Tantala d agraw n yizamulen d yilugan yesεan yiwet n tadra akked unagraw-nniġen yettuneħsaben d tutlayt, maca ur teεi ara aźayar adelsan akked imetti n tutlayt deg wacu ahat i d-tennera. tantala d anagraw i yettaġġan ad yili umsefhem s shala gar yimdanen i yessnen ala tantala akked yimdanen i yessnen ala tutlayt, tantata tettwakkes ney tettwassufey seg yakk ayen yerzan assayen unsiben, aselmed, yerna tettuseqdac ala deg uħric amezyan deg tmurt.

3. Tameslayt

Elahsab J. Dubois ma nessemgared tameslayt yef tantala, ad d-nini dakken tameslayt d anagraw n yizamulen d yilugan iseddasen deg kra n umkan d amecħuħ mađi (taddart, tameslayt nnig n wassif ney ddaw n wassif...), mgal tantala i yettilin deg kra n umkan ma nezmer ad d-nini d awesεan ney d ameqqran (tamnađt, aħric...), yerna tameslayt ur teεi ara mađi aźayar. Tutlayt ney tantala asmi ara tt-nezrew deg kra n temsalt tusdidt anamek-is nzerrew-itt am wakken d tameslayt. Tameslayt tikwal tettuneħsab am wakken d tutlayt yettwasqedcen deg kra n ugraw inmetti ney am wakken d azamul n uttekki ney

lebyi n uttekki yer ugraw-a inmetti, tameslayt *patois* d tameslayt tamagant tettwasemres deg leqdicat yerzan tafellaħt, tameslayt n yal ass tezmer ad ttettuseqdec deg yakk tignatin: tameslayt n wid yeyran, d azamul n kra n uswir n tyuri ney n lefhama mgal tameslayt tayerfant, yal tameslayt (nebder-d kan timeslayin tigejdanin) tesεa ilugan iseddasen d ayla-s kan, tesεa ilugan-nniĉen tecrek-iten yer tmeslayin-nniĉen n tutlayt.

4. Tasentala n tmaziyt

4.1. Tamuyli yef umezruy n tsentala n tmaziyt sumata akked tayult yerzan Kan taqbaylit.

Kra n tantaliwin n tmaziyt (tatergit, taqbaylit, tacerħit) ttwagelment-d syur imussnawen n kra n tmura n Lurup yecban Barthes, Venture de Paradis... leqdicat-nsen sumata dayen yerzan agmar n umawal (ney agmar n kra n tefyar akked talyiwin n yal ass). Aħas n leqdicat yerzan aglam asnilsan yemmuggen deg tazwara n temharsa n Lezzayer syur iserdasen n Fransa, leqdicat imenza yef tsentala n Yimaziyen ttuyalen yer taggara n tasut tis 19, leqdicat-a ttwaxedmen syur usdawan René Basset; i wumi nezmer ad d-nin belli d netta i yesbedden tilisa n tsentala n tmaziyt, i izrewen aħric meqqren deg trakalt n Yimaziyen, akken ad d-yegmer amud i wumi ara yeg tasleĉt mbeεd. Basset d win yettaran lwelha-s yal tikkelt yer wassay yellan gar tantaliwin, yettak azal meqqren i lasel ney i lsa n tantaliwin-a.

R. Basset yettwali ulac lemgirda gar tantaliwin n tmaziyt, yenna-d: « Gar Zennaga n yiri n Sinigal akked Souah n yimedwen n Maser, gar Zwawa n Ğerĝer akked tergit n Awlemmiden, ulac tamgarda deg wayen yerzan tajerrunt akked umawal lada timenza»²⁷

²⁷ Basset (R.), 1890 :2 « Entrele Zennaga des Bords de Sénégal et le Souah de l'oasis Égyptiennes, entre le Zouaoua du Djurdjura et la tamachek des Aoulemidens, les différences grammaticales et lexicologiques sont pour ainsi nulles, surtout les premiers »

Deg tazwara n tasut tis XX tizrawin yef Yimaziyen nernant akken ilaq; annar n leqdic yuƴal d awesεan. Amussnaw A. Basset yettuneħsab d netta i d ayella n tasut-a tis snat, yeglem-d s telqay aħas n tmeslayin d ayen i t-yeğġan ad yissin akken ilaq tamaziyt akked beħtu-ines deg yak Tafriqt n Ugafa.

Tutlayt n tmaziyt tesεa aħas n tantaliwin i yebdan s yiwet n tarrayt ur neddukel ara yef yakk adeg, yellan gar n yimedwen n Siwa (yef tlisa n usamer n Maser) deg usamer; yer Lmerruk deg umalu; yef yil agrakal deg ugafa; yer saħel n Tefriqt deg unzul. Ihi tutlayt n tmaziyt ur tewqim ara am wakken d anagraw adukkulan yerna ur tebdi ara akken ilaq yef yak adeg i tettef, timnaħin i yellan deg wadeg-a ttwassnent am wakken d timeslayin n yiwet n tutlayt, anamek-is εant yiwet n timarrawt. Maca tikwal nettaf-d kra n temnaħin d tiwesεanin (Itergiyen), tiyaħ d timezyanin maħi – d tizirin- (Waregla, Gurara, Zennaga)

A. Basset yettak i kra n yigrawen n Yimaziyen azayar n tantala am Yitergiyen, imi yettwali-ten am wakken d tasureft i d-yesfukel akka «...Itergiyen siliyen-d amaħal iman-nsen, yebda yef Yimaziyen-nniħen deg tarrayt n temeict akked tuħssa-nsen tinmettit akked usettun iniri »²⁸

Rnu yer Yitergiyen, A. Basset yemmeslay-d dayen yef kra n tegzirin yecban Zennaga akked Siwa, imi yettwali-tent d tantaliwin «Asmi agraw, am ugraw n Zennaga yettidir iman-is deg ugafa n Sinigal yef yigrawen-nniħen Imaziyen, timeslayin yemxalafen i t-id-yessilyen, εant aħas n yittewlen yemgaraden i wumi sdaxel n tmaziyt ttaken-asen yiwet n tayunt, ad d-xedmen yiwet n tantala»²⁹

²⁸ Basset (A.), 1948 :253 «*Les touaregs forment tellement un monde à part, séparés des autres berbérophones par leur genre de vie, leur constitution sociale et les distances désertiques* »

²⁹ Basset (A.), 1959 :23 «*Quand un groupe, comme Zenaga vit complètement séparés, au nord de Sénégal, de tout élément berbérophone, les différents parlers qui le constituent, finissent par avoir en commun un nombre assez considérable de traits distinctifs qui, à l'intérieur du berbère, leur confèrent une unité particulier et en font une variété dialectale* »

A.Basset yettwali beṭtu n trakalt igellu-d s beṭtu deg tesnilest, yerna yettak azal meqqren i temgarda deg usemres n tmaziyt wala i tayunt-is, yettwali snat n tmeslayin ttuneḥsabent am wakken mgaradent ula ma yella tamgarda terza kan yiwen n yittwag asnislan i wumi ad itekki fell-as akken ad d-yessebyen ney ad isfukkel ayen i yeḥseb tutlayt am wakken d azayar n tmeslayin.

A. Basset yettwali tameslayt: «...S yiwen n wudem yelhan, d tutlayt timezdit n ugraw imesnislan amezyan maḍi i izemren ad yili d amur seg kra n taddart. Tantala ma yella tella, ad tili d agraw n tmeslayin; maca ulac tantala deg tmaziyt, llan kan yittwag intalanen, wiya d imezdiyen yer waṭas n tmeslayin ala kra n yimxixen, yal yiwen s tlisa-ines yerna ad nettedday cwiṭ cwiṭ seg tmeslayt yer tayed s usaka i izemren ad yili ama s lemyawla ama s telwi kan, maca s beṭtu amjur »³⁰

Ad d-nini deg taggara dakken Basset yefren tameslayt wala tantala, taneggarut-a ur isawed ara akken ad tt-id-yesbadu s userwes n yisfernen isnislanen, anect-a yettuṭal yer yisfernen n usbadu i warɛad d-sbeynen imesnisen yef tmentelt n uxlaḍ n tumanin tintalanin.

5. Asismel n tantaliwin n tmaziyt

Asismel n tantaliwin n tmaziyt yebna yef usdukkel n tmeslayin ama eḥsab isfernen n tesnilest ama eḥsab n yisfernen yeffyen i tesnilest.

Llant snat n tewsatın n usismel:

-**Tawsit tamenzut**: asismel yeqqnen yer wazalen inmettiyen-amezruy.

-**Tawsit tis snat**: asismel eḥsab n yisfernen n tesnilest.

³⁰ Basset (A.), 1929 : 8 «D'une façon un peu idéale, la langue commence au plus petit groupe linguistique qui pourra fort bien n'être qu'un fragment de village. Le dialecte s'il se trouverait, serait un ensemble de parlers; mais il n'ya pas proprement de dialecte en berbère, il ya que des dialectaux. Ceux-ci communs à plusieurs parlers ont sauf accident rare, chacun sa limite propre, l'on passe insensiblement d'un parler à un autre par transirions plus rapides ou plus lentes, mais jamais par coupure brutale»

5.1. Asismel yebnan yef wazalen n umezruy

5.1.1. Asismel n tsekla n umezruyn Waæraben

Yettuneḥsab gar n beṭṭuyat imenza i yellan yef Yimaziyen deg tallit talemast, i yettwalin Imaziyen d wid yebḍan yef sin n yigrawen: Zénète (Iznaten) akked Senhadja (Iznaḡen). Agraw n yiznaten ttwalin-t timura n waæraben n zik d agraw yemxalaf ney yemgarad yef Yimaziyen-nniḍen acku mačči kifkif i ttidiren, Iznaten d agraw yettinigen seg temnaḍt yer tayed, ma d ayen yerzan amezruy-nsen ad t-naf d wid ur d-yewwiḍen ara zik yer Tefriqt n Ugafa, ma d ayen yerzan adeg-nsen ad t-naf d wid yettffen lludaḍ akked yiyezran, ma d ayen yerzan lašel-nsen ad ten-naf d wid i d-yekkan seg umerrew amezwaru i wumi qqaren *Botr* mgal *Baranis* i yettuneḥsaben d imerrew amenzu n Yiznaken, ineggura-ya d inasliyen ur ttinigen ara d ifellaḡen d wid i yetteicin deg yidurar n Lmerrruk.

5.1.1.1. Asismel n Ibn khaldoun

Yebḍa Imaziyen yef kraḍ n twaculin, Imesmuden akked Yiznaten d Yiznagen, asismel-a s wazal-is nezmer ad t-neḥseb am wakken d azarmezruy n tesnilest n Yimaziyen. Tamussnawt M. Ameer tesbeyyen-d asismel-a akken ilaq, terna tefka-yas azal tenna-d: «Timeslayin ilaq ad ilint ttwasessemlent mebla ma necyel akken ad nissin ma yella imsiwal frurin-d seg Botr d Branis ney seg Sanhaḡa»³¹

5.1.1.2. Asismel n R. Basset

deg tezrawin i iga yef Yimaziyen n temnaḍin n Clef, Mzab, Waregla, wed Riy (Tuggurt) yefka azwel i yidlisen-is: Tazrawt yef teznatit ... awal-a ney irem-a taznatit yettwaseqdec am wakken d aknaw n wawal Imaziyen maca anagar deg temnaḍin i yettuneḥsaben am wakken ttwazedyent syur Imaziyen, anamek n

³¹ Ameer (M.), 1990: 25 « Les parlers doivent être catalogués sans trop s'occuper de savoir si les locuteurs sont descendants de Botr, de Branes, ou de Sanhadja ».

waya timnađın yellan gar *Tripolitaine* yer Rif n Lmerruk ad d-næddi yef temnađt n Lewras akked Yimaziyen, Waregla, Tidikelt, Twat, Lmeyreb alemmas.

Deg taggara nezmer ad d-nini belli asismel-a (Iznaten akked Yiznagen) ur yesæi ara azal ney ur iwulem ara acku d win ibedden yef yisfernen yerzan ama iderma, ama anadi deg lasel M. Ameer «Lebyi n beţtu n tantaliwin ełahsab asismel-a (Iznaten/ Iznaken) anda ur nessin ara ula d antum n umezruy, d atekki yef tmiđranin yef wacu ur nezmir ara ad nettkel»³²

5.1.2.Asismel ibedden yef yisfernen n tesnilest

5.1.2.1.Asismel n R. Basset

Asismel-a isumer-it-id deg udlis-is i wumi isemma “Manuel de langue Kabyle” ibed yef yisfernen n temsislit am wayen yecban tizenzeyt...

- Tantaliwin ur neğghid ara: Itergiyen, Awellimmiden, Zenaga, Guanche.
- Tantaliwin iğehden: Itergiyen n ugafa, Zwawa, Celha, Gadames, Syuwah, ksar n unzul, urani, Bni Iznacen.
- Tanataliwin tilemmasın: tarifit, taznatit n Bni Menaser, n Mzab, n Wed Riy, tacawit, Waregla.

Asismel-a yuyal yettwasewzel yer sdat yer ufraz gar tmeslayin taggayin akked tmeslayin tizenzayin

Asismel-a eawden-as tamuylı inelmaden n R. Basset gar-asen E. Destaing (1907)

³² Ameer (M.), 1990: 16 « *Vouloir faire une répartition des dialectes à partir de cette division (Zénète/ Sanhadja) dont on ne connaît même pas la consistance historique. C'est s'appuyer sur des notions peu fiable et en tous cas plus arbitraire que toutes les autres* »

5.1.2.2. Asismel n E. Destaing (1907)

E. Destaing isumer-d asismel n tantaliwin n tmaziyt n tmurt n Lmerruk yessbed-itent yef waddaten yemgaraden, ama ayen yerzan tamsislit, tasnalya, taseddast akked umawal. Yebḍa tantaliwin yef sin n yigrawen:

Agraw n ugafa n Lmerruk: timeslayin n Rif (yecban Ayt Itteft, Ibeqqayen, Temsaman, Bni Bou Yahi). Akked tmeslayin n Bni Iznacen (yecban Bni Yala, Bni Amer, Ait Seyrucen)

Agraw n unzul n Lmerruk: Tiqbilin yettmeslayen tacełhit, timeslayin n Ayt Atta, ayt Izdeg, At Saddam, Ayt Yusi, Ayt Mgild, Igerwan.

5.1.2.3. Asismel n A. Willms

Willms deg yiwen n umagrad i yura deg useggas 1980 yemmeslay-d yef usismel n yigrawen Imaziyen, Willms «Yesselken usugen* afransis n tezrawin yef yimaziyen i iḥessben tamaziyt am wakken d tutlayt yebḍan yef tantaliwin, ełahsab tarakalt-nsent»³³

Lqaleb-a iteddem deg leḥsab sin n yisfernen s wazal-nsen ama ayen yecban asettun akked unermis gar yigrawen isnislanen.

-Amur amenzu: inefkan i yettwadmen i tesleḍt d akalman n yimqimen udmawanen akked kra n snat n temrawin n tmiḍranin n yisekła yettarwen yef wacu i yexdem tasastant deg yak tarakalt n Yimaziyen. Yessaweḍ yer taggara ad d-yesbadu timeslayin tidiganin, tantaliwin, addatantaliwin akked tutlayin.

-Amur wis sin: yerza amgired (*sub-dialectale*) n tmaziyt, yessexdem ttawilat i yesḥa d ayla-s kra n ilsiman i d-yegmer deg unzul-asamer n Lmerruk, kra n umgired deg unagraw asnilsi

³³ Willms (A.), 1980: 80 « Confirme la conception de la berberologie française qui considère le berbère comme une langue divisée en dialectes d'ordre géographique »

yettwaddem am wakken d inefkan n wadda, agemmuđ i uyur yessawed yesbeyyen-d d akken inagrawen «*sub-dialectaux*» ttemhazen yer umgired yerzan tarakalt.

Deg leqdic-is Willms yemmeslay-d yef krađ n yimattayen, yexdem amgired gar n yilsiman am wakken d tameslayt n yiwen n umdan akked ugraw n tantaliwin am wakken d tutlayt n yakk imaziyen. Asismel i d-yessumer yebđat yef ukuz n taggayin:

-**Taggayt tamenzut:** Lmerruk n unzul akked Lmerruk n tlemmast (Cluđ akked Biraber, Zayan akked Zemmur, At Nđir).

-**Taggayt tis snat:** Lmeyreb n ugafa akked umalu n Lezzayer (Bni Iznacen, Senhađa, Bni Snus).

- **Taggayt tis krađ:** Anzul n Lezzayer, Tiniri talemast, Tripuli (Mzab, Waregla, Neffusi, Twareg), Lezzayer n usamer (Icawiyen), Maser (Siwa)

- **Taggayt tis kuz:** Leqbayel

S. Chaker: yettwali asismel-a s leđder: « Tanekda n yisfernen yettwaxtaren ilaq ad yemmuqel yiwen deg-sen i ugraw n tmeslayin yettwazerwen»³⁴

Nait Zerrad yettwali deg usismel n Willms d asurif s wazal-is yer sdat; iħseb-it d ummid yerna yettwali iskat n tjerrumt d umawal i yessemres ġehden. Ɠas ma yešteeref s kra n lixsas yellan deg-s d aya i d-yessegza mi d-yura deg useggas (2004) aerađ aneggaru n usismel, win n Willms (1980) d ummid, iwennaε acku yezdi aswir ajerruman d umawalan. Ɠas akken yella deg-s lixsas acku Willms yerra deg laħsab anagar kra kan n yiferdisen n userwes : imqimen udmawanen d umawal n yisekla yeεan lyella.

³⁴ Chaker (S.), 1982: 154-156 « *La représentativité des critères choisis, mériterait d'être vérifiée pour l'ensemble des parlars étudiés* »

5.1.2.4. Asismel n A. Akhenvald

A. Akhenvald tessumer-d tasekka-nniġen n usismel n tmeslayin n Yimaziyen, tbedd yef waddaten n tseddast teddem-d azal n 50 n tmeslayin am wakken d ammud i tesleđt terna tessekcem-d ama tasnalya n yisem, tasnalya n umyag, tiyessiwin n tseddast.

Tamyarut tessemgared ukuz n yigrawen isnilsanen:

- Imaziyen n umalu (Zenaga).
- Imaziyen n unzul (Twareg).
- Imaziyen n usamer (Libya d Maser).
- Imaziyen n ugafa (tameslayt n Lmerruk, Lezzayer, Tunes).

5.1.2.5. Asissmel n O. Durand

Seld mi iga asenqed i yisisemlen ieddin, isumer-d asismel d amaynut, anda i yesmenyef isfernen n tussnatmetti, yerna itekka yef yisfernen yesean assay d yinefkan imesyaruten n umezruy n yigrawen Imaziyen akked yinefkan yerzan tussnatmetti am ugađđi akked yimmusuten idaxliyen gar n yigrawen Imaziyen.

Asismel-a ibed yef tseftit n yinefkan eħasab n yigrawen irakalen imeqqranen: Imaziyen n cerq (Siwa d Libya). Imaziyen n lıerb (Leqbayel d yicawiyen alamma d Lmerruk) akked Yimaziyen n yiri n unzul (Twareg)

Asismel i d-yessumer

- a) Imaziyen yettinigen : (Twareg)
- b) Imaziyen inařliyen :
 - Wid i izedyen deg yidurar (Icawiyen, Leqbayel, Irifiyen, Icenwiyen).
 - Wid n sseħra (Imzabiyen, Icelħiyen).
- c) Imaziyen unsiben (Icelħiyen, Itergiyen, Leqbayel).

5.1.2.6. Asismel n Mouhand Akli hadadou

Muħend Akli Ĥadadu ma yella yeshel usemgired amedyā gar teqbaylit akked tcelħit ney tatergit, asismel n tantaliwin yef tijuma n tantaliwin ur yeshil ara mađi acku ttilin aħas n wuguren.

Isisemlen i d-yellan yakan syur imura inselmen yef tantaliwin tiznatin akked tiznagin, Imaziyen yef sin n waggayen, yef jeddi-tsen akked wamek i ttidiren. Iznatiyen d wid yettinigen, kkan-d seg Madyes, Isenħađiyen d inasliyen kkan-d seg Branis, ma yella d ssaħ isfernen n temsilit akked tesnalya ttsemmiħen-ay akken ad neg amgired gar tantaliwin tiznatiyin akked tantaliwin tisenħađiyin, asismel-a ur yelli ara d anagrawan, ladya annar Azennati.

Deg uraju akken ad d-binen yisfernen ilaqen, ad d-nessumer asismel yef semmus n temnađin:

- Tamnađt 1: Tantaliwin n unzul ney n Itergiyen (Timeslayin n Uheggar, Twat, Ĥat, Niđer d Mali...)

- Tamnađt 2: Tantaliwin ticerqiyin, tantaliwin n Siwa deg Maser, tantaliwin n Libya akked tantaliwin titunsiyin.

- Tamnađt 3: Tantaliwin n ugafa n tniri (Tantaliwin n Mzab, Waregla, Gurara...)

-Tamnađt 4: Tantaliwin tiyerbiyin (Tantaliwin n Lezzayer, Leqbayel, Icawiyen, Icenwiyen, tantaliwin n Lmerruk: cluħ, tamaziyt, tarifit).

-Tamnađt 5: Zennaga (Tanataliwin n Muriħaniya)

Deg tmuyli-ayi ur nezmir ara ad neħseb awal am wakken d imezgi ma yella ur yelli ara xersum yer snat n temnađin.

5.1.2.7. Asismel n K. Nait-Zerrad

K. Nait-Zerrad yemmeslay-d yef yisismen i yellan akk yef tantaliwin n tmaziyt d akken ttwayemren s tezrawin tayunkudatin, maca ur ugiten-tt ara tezrawin tazgarkudatin.

K. Nait-Zerrad yettwali dakken asismel yelhan d win ilaqen ad d-iger ama ayen yerzan tasnilit, tasnalya-taseddast akked umawal.

➤ Isfernen i yeddem akken ad yeg asismel-is

-Imyagen n uzenziy cc (Mebla tiyra tičuranin).

-Tasnalya n umeskan n tizzin.

-Tilin ney abay n teyri tamenzut n yisem.

-Tuggi* n ulyiwan k. kk. g. gg.

-Tuggi n tergalt “h”.

-Tilin n urmir ussid ibaw.

-Tikkest* deg umawal.

K. Nait-Zezad d win i iæerden ad yeddem atas n tmeslayin ama d tid n Lmerruk, Lezzayer, Libya, Niđer, Mali, Tunes, Maser, Muriṭani

➤ Asismel uyur yessawed

Agraw amenzu

Timeslayin n Lmeyreb alemmas (At Ndir, Gulmima, Tigenhir, Izdeg, Senhağ n Sraier, tacełhit) timeslayin n unzul n Lmerruk, Tta, Iyrem, Semlal, Imyid/Zennaga/ Leqbayel.

Itargiyen : Aheggar, w. Y, Tasneslent.

Fuqaha.

Ugila.

Siwa.

Agraw wis sin: Neffusa.

Agraw wis krađ: Ğadames.

Agaraw wis ukuz:

At Seyrun / Fignig/ bni Snus/ Bissa/ Tim/ Mzab/ Waregla.

Iznacen/ Jerba.

Rif/ Mtmata/ Awras.

Ğenwa.

Beđtu-ayi yebna yef tuggiwin n temsilit seg tama yer tayed yef yittewlen n tesnalya d tseddast akked umawal. Asismel Leqbayel tameqqrant, Leqbayel tamezyant ur yesei ara azal yer yimmusnawen n tesnilest d beđtu ur yellin ara d usdid.

Sin n yigrawen imeqqrannen i nezmer ad d-nessemxilef: Agraw 1, 2, 3 seg tama, agraw wis 4 seg tama-nniđen, agraw aneggaru-a i wumi qqaren «Iznatiyin».

Ahric n tesledt

1. Talyiwin n yimyagen iħerfiyen bu krađ n tergalin deg usegzawal n J.M.Dallet d userwes-nsen yer temnađin-nniđen (Tazmalt, Burğ Mira)

➤ **Talya er₁r₂er₃/ r₁r₂er₃**

- Llan 742 n yimyagen deg (AtM) **Md:** ebded, ebder, ebdeε, ebđer
- Llan 397 n yimyagen deg (T) **Md:** ebder, ebges, ebleε
- Llan 367 n yimyagen deg (BM) **Md:** ebdeε, ebleε, ebrek

- Deg wayen yerzan tamsislit :

Deg temnađt n Tezmalt tella-d temgarda akked temnađt n At Mangellat anda llan 21 n yimyagen, ma yella deg temnađt n Burğ Mira llan 55 n yimyagen

Md:

/k/—/K/: ekεec →kεec (T), enker→nker (BM)

/x^w/—/x/, /c/—/j/: ecx^wer →jxer (T), ecx^wer →

jxer(BM)

/d/— /t/: ecđeh →ecteh (BM)

/t/—/t/: efter →fter (BM)

/z/—/z/: ezmed →zmed(T), efrez→frez(BM)

/h/—/ħ/: ezhef →zħef (T)

/b/—/ḅ/: eεbed →εḅed(BM)

/w/—/m/: ewsex →msex(T)

/b^w/—/b/: eyb^wen →yben(BM)

/γ/—/ε/: eymeq →εmeq(BM)

/j/—/z/: ejwej →zwej(T) (BM)

/k^w/—/k/: ek^wfer →kfer(BM)

/ɾ/—/γ/: eɾmez →γmez (T) (BM)

/j/—/ğ/: enjer →nğer(T)

/q/—/γ/: enqed →nyed(T)

/γ/—/q/: enγec →nqec(T), enγer →nqer(BM)

/z/—/s/: enzer →nser(T) (BM)

/l/—/f/: elfez →effez(T) (BM)

- Timplil n teyra :

Md:

(ø—, u—): eεzeg →εuzzeg(T)
 eεzeg →εazeg (BM)

▪ **Tamawt**

Talya $er_1r_2er_3$ akked talya $r_1r_2er_3$ d yiwet, tamezwarut tettwaru s "e"yer tazwara, ma d talya tis snat ur tesei ara "e". Ad nini dakken "e"yella kan deg tira n Dallet yettwakkes deg tira tumrist.

➤ **Talya $er_1r_1er_2/ r_1r_1er_2$**

- Llan 55 n yimyagen deg (AT M) **Md:** ebbeḥ, eccef, ecceg, effeḃ, effer
- Llan 37 n yimayeg deg (T) **Md:** eccef, edder, effer
- Llan 25 n yimyagen deg (BM) **Md:** ebbeḥ, eccef, ecceg
 - Yella-d ubeddel deg temsislit:

Deg temnaḍt n Tezmalt tella-d temgarda akked temnaḍt n At Mangellat anda llan 04 n yimyagen, ma yella deg temnaḍt n Burğ Mira llan 05 n yimyagen .

MD:

/g—/d/: ecceg →cced(T)
 /l—/t/ : ellef →ltef(T) (BM) (ayelluy n tergal t n uḥar)
 /d—/t/: cced →ccet, eṣṣed →sset, etted →ttet(BM)
 /s—/t/: eṣṣer →ṣter (ayelluy n tergal t n uḥar) (BM)
 (e—, a—) : effeg → affeg (T)
 (ø—, a—), (e—, a—): dden →addan (T)

▪ **Tamawt**

Talya $er_1r_1er_2$ akked talya $r_1r_1er_2$ d yiwet, tamezwarut tettwaru s "e"yer tazwara, ma d talya tis snat ur tesei ara "e". Ad nini dakken "e"yella kan deg tira n Dallet yettwakkes deg tira tumrist.

➤ **Talya $er_1r_2ar_3/ r_1r_2ar_3$**

- Llan 03 n yimyagen deg (At M) **Md:** entab, entam, enṭae
- ulac imyagen-a s talya-a deg (T)
- yella 01 umyag deg (BM) **Md:** nṭae

▪ **Tamawt**

Talya $er_1r_2ar_3$ akked talya $r_1r_2ar_3$ d yiwet, tamezwarut tettwaru s "e" yer tazwara, ma d talya tis snat ur tesei ara "e". Ad nini dakken "e" yella kan deg tira n Dallet yettwakkes deg tira tumrist.

➤ **Talya $r_1ur_2r_3u$**

- Llan 02 n yimyagen deg (At M) **Md:** yunfu, yunzu
- Llan 02 n yimyagen deg (T) **Md:** yunfu, yunzu
- Yella 01n umyag deg (BM) **Md :** yunfu

➤ **Talya $er_1r_2ur_3i/ r_1r_2ur_3i$**

- Llan 02 n yimyagen deg (At M) **Md:** eqfufi, ngugi
- Yella 01n umyag deg (T) **Md:** qfufi
- Ulac imyagen s talya-a deg (BM)

➤ **Talya $er_1r_2ir_3/r_1r_2ir_3$**

- Llan 08 n yimyagen deg (At M) **Md:** ektil, ertih, extir, zwir
- Llan 03 n yimyagen deg (T) **Md:** ktil, xtir, zwir
- Llan 04 n yimyagen deg (BM) **Md:** ktal, rtiħ, xtar, zwir
 - Deg temnađt n Burğ Mira yella-d ubeddel
 - tamsisliit: /t/→/t/: xtir →xtar
 - ektil→ktal, extir→xtar mgaraden s temlellit n

teyra (i—, a—)

➤ **Talya $er_1r_1ar_2/r_1r_1ar_2$**

- Llan 10 n yimyagen deg (At M) **Md:** bbaħ, ččar, ggaĵ, kkaw
- Llan 08 n yimyagen deg (T) **Md:** ččar, nnal, nnam
- Llan 07 n yimyagen deg (BM) qqar, ttaħ, nnam
 - Deg Tezmalt yella yiwen n umyag yemgarad yef (At M) deg temsisliit
 - ggaĵ →ggağ
 - deg Burğ Mira yella yiwen n umyag yemgarad s temlellil n teyra

- ellaz → lluz

➤ **Talya r₁ar₂er₃**

- Llan 61 n yimyagen deg (At M) **Md:** bedeε, bađen, barek
- Llan 32 n yimyagen deg (T) **Md:** barek, cabek, carek
- Llan 33 n yimyagen deg (BM) **Md:** hajer, jaweb, rabee
 - Deg Tezmalt yella-d umgired deg 01 n umyag deg temsislit
 - Deg Burğ Mira yella-d umgired deg 04 n yimyagen deg temsislit

Md:

/d/—/d/ : qader→qader (T)

/b/—/b/ : bađen→bađen (BM)

/d/—/t/ : dawee→tawee (BM)

/d/—/d/ : qader→qader (BM)

Timlellil n teyra:

(e—, a—): dawee→tawee (BM)

➤ **Talya ir₁r₁ir₂**

- Llan 02 n yimyagen deg (At M) **Md:** irriq, issin
- Llan 02 n yimyagen deg (T) **Md:** irriq, issin
- Yella 01 n umyag deg (BM) **Md:** issin

➤ **Talya r₁r₁ur₂i**

- yella 01 n umyag deg (At M) **Md:** ccuci
- ulac imyagen s talya-a deg (T)
- ulac imyagen s talya-a deg (BM)

➤ **Talya r₁r₁ur₂**

- Yella 01 n umyag s talya-ya deg (At M) **Md:** xxuc
- Yella 01 n umyag s talya-ya deg (T) **Md:** xxuc
- Yella 01 n umyag s talya-ya deg (BM) **Md:** xxuc

➤ **Talya r₁ir₂r₃i**

- yella 01 n umyag deg (At M) **Md:** cihwi
- yella 01 n umyag s talya-ya deg (T) **Md:** cihwa
- ulac imyagen s talya-a deg (BM)
 - yella-d ubeddel deg temnađt n tezmalt s temlellil n teyra
 - (i—, a—): cihwi → cihwa
- **Talya r₁er₂r₃i**
 - llan 04 n yimyagen deg (At M) **Md:** cedhi, cetki, seđhi, serbi
 - llan 03 n yimyagen deg (T) **Md:** cedhi, cetki, sethi
 - llan 03 n yimyagen deg (BM) **Md:** cetki, sethi, serbi
 - I snat n temnađin yella-d ubeddel deg temsislit deg 01 n umyag
 - /d/—/t/ : seđhi (at m) → sethi (T) (BM)
- **Talya r₁ur₂r₃i**
 - Yella 01 n umyag deg (At M) **Md:** jujri
 - Yella 01 n umyag deg (T) **Md:** jujru
 - Ulac imyagen s talya-a deg (BM)
 - Yella-d ubeddel deg Tezmalt deg temsislit
 - (i—, u—) : jujri → jujru
- **Talya r₁ur₂r₃u**
 - Llan 02 n yimyagen deg (At M) **Md:** yunfu, yunzu
 - Llan 02 n yimyagen deg (T) **Md:** yunfu, yunzu
 - Yella 01 n umyag deg (BM) **Md:** yunfu
- **Talya r₁er₂r₂**
 - Llan 09 n yimyagen deg (At M) **Md:** becc, bedd, ceqq, gell
 - Llan 04 n yimyagen deg (T) **Md:** becc, bedd, ħess
 - Llan 03 n yimyagen deg (BM) **Md:** becc, bedd, yeđti
 - Yella ubeddel deg 01 n umyag deg (BM) deg temsislit

- (ø—, i—): yett →yetti

➤ **Talya ar₁r₂er₃**

- Yella 01 n umyag deg (At M) **Md:** awħed
- Ulac imyagen s talya-a deg (T)
- Yella 01 n umyag deg (BM) **Md:** wħed
 - Yella-d ubeddel deg temsislit deg burğ mira
 - (a—, ø—): awħed(Dallet) →wħed

➤ **Talya ar₁r₁er₂**

- Yella 01 n umyag deg (At M) **Md:** azzel
- Yella 01 n umyag deg (T) **Md:** azzel
- Ulac imyagen s talya-a deg (BM)

➤ **Talya ir₁r₂ir₃**

- Llan 28 n yimyagen deg (At M) **Md:** ibnin, ibrik, ifrir, ihriw, ikniw, iksin
- Llan 21 n yimyagen deg (T) **Md:** ibnin, ibrik, ifrir
- Llan 13 n yimyagen deg (BM) **Md:** ibnin, iksin, ikniw
 - Deg Tezmalt yella-d ubeddel deg 01 n umyag
 - Iyzif → yzif
 - Deg Burğ Mira llan 05 n yimyagen mgaraden d (At M)
 - Yella-d ubeddel deg temsislit
 - /d/—/t/: ierid →ierit
 - Ayelluy n teyra:
 - (i—, ø—): iyzif →yzif
 - Ibrik →brik
 - irzig →rzig
 - iqilil → qilil

➤ **Talya r₁ur₂r₂**

- Llan 43 n yimyagen deg (At M) **Md:** bubb, budd, cudd, cukk

- Llan 27 n yimyagen deg (T) **Md:** budd, cudd, cuff
- Llan 16 n yimyagen deg (bm) **Md:** cukk, cuqq, hucc
 - Yella-d ubeddel deg 01 n umyag deg Burğ Mira deg temsislit
 - /d/—/t/: **đurr** → **turr**

➤ **Talya r₁r₂ar₃i**

- Yella 01 n umyag deg (At M) **Md:** frari
- Yella 01 n umyag deg (T) **Md:** frari
- Yella 01 n umyag deg (BM) **Md:** frari

➤ **Talya r₁r₁ir₂**

- Llan 02 n yimyagen deg (At M) **Md:** qqim, zziż
- Llan 02 n yimyagen deg (T) **Md:** qqim, zziż
- Yella 01 n umyag deg (BM) **Md:** qqim

➤ **Talya r₁ar₂r₂**

- Llan 05 n yimyagen deg (At M) **Md:** fakk, qadd, qass, xaşş, εass
- Llan 03 n yimyagen deg (T) **Md:** fakk, xaşş, εass
- Llan 03 n yimyagen deg (BM) **Md:** fukk, xuşş, εuss
 - Yella-d umgired ger (At M) d (BM) s temlilit n teyra
(a—, u—): **fakk** → **fukk**
Xaşş → **xuşş**
εass → **εuss**

➤ **Talya r₁er₂r₂i**

- Llan 41 n yimyagen deg (At M) **Md:** beqqi, berri, cebbi, ceṭṭi, heggi
- Llan 25 n yimyagen deg (T) **Md:** cebbi, heggi, henna
- Llan 16 n yimyagen deg (BM) **Md:** menni, semmi, seqqi

➤ **Talya r₁r₁ar₂i**

- Llan 03 n yimyagen deg (At M) **Md:** ddari, ggaji, ggani
- Llan 03 n yimyagen deg (T) **Md:** ddari, ggani
- Llan 02 n yimyagen deg (BM) **Md:** ggaji
 - Deg tezmalt yella-d ubeddel deg 01 n umyag
 - ggaji → ggađi
 - deg Burđ Mira llan 02 n yimyagen mgaraden d (At M), yella-d ubeddel deg temsislit
 - /j/—/đ/: ggaji → ggađi
 - Timlellit n teyra :
 - (a—, u—) : ddari → dduri

➤ **Talya r₁r₁r₂i**

- Yella 01 n umyag deg (At M) **Md:** dđei
- Yella 01 n umyag deg (T)
 - Tazmalt yella-d ubeddel deg temsislit
 - **dđei** → **dđeu**
- ulac amyag-a deg (BM)

➤ **Talya r₁r₂er₃**

- Llan 09 n yimyagen deg (At M) **Md:** ciwer, ħiwec, ħiwel, ħiwet, niwel
- Llan 08 n yimyagen deg (T) **Md:** ciwer, niwel
- Llan 05 n yimyagen deg (BM) **Md:** cawer, nawel
 - Llan 04 n yimyagen deg Bourđ Mira mgaraden deg temsislit
 - (i—, a—) : **ciwer** → **cawer**
 - niwel** → **nawel**
 - eiwed** → **εawed**
 - eiwen** → **εawen**

➤ **Talya r₁ur₂er₃**

- Llan 04 n yimyagen deg (At M) **Md:** buħef, muqel, susef, zuzen
- Llan 03 n yimyagen deg (T) **Md:** muqel, susef, zuzen
- Llan 02 n yimyagen deg (BM) **Md:** muqel, susel

➤ **Talya r₁ir₂r₂**

- Llan 07 n yimyagen deg (At M) bibb, đill, ħibb
- Llan 05 n yimyagen deg (T) bibb, qirr, qiss
- Llan 04 n yimyagen deg (BM) ħibb, qqim, sib
 - I snat n temnađın yella-d ubeddel deg yiwen n umyag deg temsislit
 - đill →đill (T) (BM)

2. Abeddel deg tmezra

2.1. Aeedi seg umyag aħerfi yer yimizri d yimizri ibaw

➤ **talya er₁r₂er₃/r₁r₂e₃r (At M: 742), (T: 397), (BM: 367)**

- tamnađt n (At M): deg yimizri yella-d ubeddel deg 15 n yimyagen s temlellit n teyra i→a
Md: cetki →cetka
 Ma yella deg ibaw yella-d ubeddel deg 681 n yimyagen s temlellit n teyra e→i
Md: ebded →bded →bdid
- tamnađt n (T): ulac abeddel deg yimizri, yella-d ubeddel deg yimyagen akk n yimizri ibaw s temlellit n teyra e→i
Md: bded →bded → bdid
- tamnađt n (BM) : yella-d ubeddel deg 01 n umyag deg yimizri s temlellit n teyra e →i md: bred →brid
 yella-d ubeddel deg 353 n yimyagen deg ibaw s temlellit n teyra e →i **md:** cten →c̣ten →c̣tin
 - aserwes n temnađın yer (At M)

yella-d umgired gar temnađin-a d (At M) deg kra n yimyagen deg yimizri anda (BM) $e \rightarrow i$, (T) ulac abeddel, (At M) $i \rightarrow a$,
 ma yella d ibaw yusa-d kif kif (At M) d $e \rightarrow i$.
 llan 02 n yimyagen bedden talya deg (BM)
 $\mathbf{er_1r_2er_3} \rightarrow \mathbf{r_1ar_2er_3}$ amyag-a deg yimizri d ibaw
 ibeddel s temlellit n teyra $a \rightarrow u$: $\epsilon a z e g \rightarrow \epsilon u z e g$
 $\rightarrow \epsilon u z e g$

➤ talya $\mathbf{r_1r_1r_2i}$ (At M: 01), (T: 01), (BM: 01)

- tamnađt n (At M): yella-d ubeddel deg yimizri d ibaw s temlellit n teyra $i \rightarrow a$

Md: $dd\epsilon i \rightarrow dd\epsilon a \rightarrow dde a$

- tamnađt n (T): $\mathbf{r_1r_1r_2i} \rightarrow \mathbf{r_1r_1r_2u}$

yella-d ubeddel s temlellit n teyra ($u \rightarrow a$) deg yimizri, ma yella deg ibaw ($u \rightarrow i$)

Md: $dd\epsilon u \rightarrow dd\epsilon a \rightarrow dde i$

- tamnađt n (BM): yella-d ubeddel deg yimizri d ibaw s temlellit n teyra $i \rightarrow a$

Md: $dd\epsilon i \rightarrow dd\epsilon a \rightarrow dde a$

- aserwes temnađin yer (At M)

deg yimizri d ibaw (BM) d (At M) ulac abeddel ma yella d (T) temgarad yef (At M) anda talya n umyag-a tbeddel $\mathbf{r_1r_1r_2i} \rightarrow \mathbf{r_1r_1r_2u}$ $i \rightarrow u$ yella-d ubeddel deg yimizri $u \rightarrow a$, ibaw $u \rightarrow i$

➤ talya $\mathbf{r_1ar_2er_3}$ (At M: 61), (T: 32), (BM: 33)

- Deg temnađt n (At M):

- yella-d ubeddel deg 58 n yimyagen deg yimizri s temlellit n teyra $a \rightarrow u$

Md: $naze\epsilon \rightarrow nuz\epsilon \rightarrow naze\epsilon$

- Yella-d ubeddel deg ibaw deg 03 n yimyagen s temlellit n teyra $a \rightarrow u$ **Md:** $sa\epsilon ef \rightarrow sa\epsilon ef \rightarrow su\epsilon ef$

- Yella-d ubeddel deg 01 n umyag deg ibaw s temlellit n teyra $e \rightarrow i$ **Md:** $matel \rightarrow matel \rightarrow mtil$

- Deg temnađt n (T): yella-d ubeddel yer yimizri d ibaw s temlellit n teyra a→u

Md: barek →burek →burek

- Tamnađt n (BM): yella-d ubeddel deg 09 n yimyagen deg yimizri 14 n yimyagen deg ibaw s temlellit n teyra a →u

Md: careε →cureε → cureε

- Aserwes n temnađin yer (At M)

Ulac abeddel gar temnađin-a d (At M) deg talya-a deg yimizri d ibaw

➤ **talya r₁er₂r₂i (At M: 41), (T:25), (BM:16)**

- tamnađt n (At M):

- yella-d ubeddel deg 40 n yimyagen deg imizri s temlellit n teyra i→a

Md: berri →berra

- yella 01 n umyag ibeddel deg ibaw s temlellit n teyra i→a

Md: sehhi →sehha →sehha

- tamnađt n (T): yella-d ubeddel deg yimizri d ibaw s temlellit n teyra i→a

Md: cebbi →cebba →cebba

- tamnađt (BM): yella-d ubeddel deg 15 n yimyagen deg yimizri s temlellit n teyra i →a **md:** yenni →yenna
yella-d ubeddel deg 16 n yimyagen deg ibaw s temlellit n teyra i →a **md:** welli →wella →wella

- aserwes n temnađin yer (At M)

ulac abeddel gar temnađin-a d (At M) deg talya-a deg imizri d ibaw

➤ **talya r₁r₁ar₂ (At M: 10), (T:08), (BM: 07)**

- tamnađt n (At M) : yella-d ubeddel deg 08 n yimyagen deg yimizri s temlellit n teyra a→u

Md: ččar →ččur →čcar

Yella-d ubeddel deg 01 n umyag deg ibaw s temlellit n teyra
a →u

Md: nnam →nnum →nnum

- tamnađt n (T): yella-d ubeddel deg 05 n yimyagen deg yimizri d yibaw s temlellit n teyra a→u

Md: ččar →ččur →ččur

- tamnađt n (BM) : yella-d ubeddel deg 03 n yimyagen deg yimizri d ibaw s temlellit n teyra a →u **md:** ččar →ččur →ččur

- aserwes n temnađin yer (At M)

ulac abeddel gar temnađin-a d (At M) deg talya-a deg yimizri d ibaw

➤ **talya er₁r₂ir₃ (At M: 08), (T:03), (BM: 04)**

- tamnađt n (At M): yella-d ubeddel deg akk imyagen deg yimizri s temlellit n teyra i→a

Md: eħdij →ħdaj

- tamnađt n (T): llan 03 seg uħerfi yer yimizri d yibaw yella-d ubeddel s temlellit n teyra i→a

Md: ħwiğ →ħwağ →ħwağ

- tamnađt n (BM) : yella-d ubeddel deg 01 n umyag deg yimizri s temlellit n teyra i →e **md:** rtiħ →rteħ

- Aserwes n temnađin yer (At M)

Ulac abeddeg gar (T) d (At M) deg yimizri

Ulac abeddel gar (BM) d (At M) deg ibaw

Yella-d ubeddel gar yimizri n (BM) d win n (At M)

deg yiwen n umyag kan i→e

Yella-d ubeddel gar ibaw n (T) d win n (At M) i→a

➤ **talya r₁r₁ir₂ (At M: 02), (T:02), (BM: 01)**

- tamnađt n (At M): yella-d ubeddel deg yimizri s temlellit n teyra

Md: zziz →zzaz →zziz

- tamnađt n (T): yella-d ubeddel deg 01 n umyag deg yimizri d ibaw s temlellit n teyra i →a **md:** zziž →zzaz →zzaz

- tamnađt n (BM): ulac abeddel deg umyag-a

- aserwes n temnađin yer (At M)

yella-d ubeddel deg temnađt n (T) deg yiwen n umyag kan deg ibaw i→a

➤ **talya r₁ir₂er₃ (At M: 09), (T:08), (BM: 05)**

- tamnađt n (At M): yella-d ubeddel deg 07 n yimyagen deg yimizri s temlellit n teyra i→a

Md: yiwel →yawel

yella-d ubeddel deg 01 n umyag deg ibaw s temlellit n teyra i→a

Md: ciwer →ciwer →cawer

- tamnađt n (T): yella-d ubeddel deg yimizri d ibaw s temlellit n teyra i→a deg yemyagen akk

Md: ciwer →cawer →cawer

- tamnađt n (bm): llan 04 n yimyagen tbeddel talya-a **r₁ir₂er₃** → **r₁ar₂er₃**

yella-d ubeddel deg 01 n umyag deg ibaw s temlellit n teyra i →a

Md: ħiwec →ħiwec →ħawec

- aserwes n temnađin gar (At M)

ulac abeddel gar (T) d (At M) deg imizri d ibaw

ulac abeddel deg yiwen n umyag deg (BM) deg imizri d ibaw

deg (BM) llan 04 n yimyagen tbeddel talya-a

r₁ir₂er₃ → **r₁ar₂er₃**

➤ **talya r₁r₁er₂ (At M: 55), (T:37), (BM: 25)**

- tamnađt n (At M): yella-d ubeddel deg 02 n yimyagen deg yimizri s temlellit n teyra

e→a: ččeħ →ččaħ

e→u: emmet →mmut

yella-d ubeddel deg 53 n yimyagen deg ibaw s temlellit n teyra

e→i: bber →bber →bbir

yella-d ubeddel deg 01 n umyag deg ibaw s temlellit n teyra

e→u: emmet →mmut →mmut

- tamnađt n (T): deg yimizri d ibaw yella-d ubeddel deg 31 n yimyagen s temlellit n teyra deg yibaw e→i,

Md: bbey →bbey →bbiy

Yella 01 n umyag ibeddel deg yimizri d ibaw s temlellit n teyra

Md: mmet →mmut →mmut

- tamnađt n (BM): yella-d ubeddel deg 01 n umyag deg yimizri s temlellit n teyra e→u

Md: mmet→mmut

Yella-d ubeddel deg 19 n yimyagen deg ibaw s temlellit n teyra e→i

Md: llez →llez →lliz

- aserwes n temnađin yer (At M)

yella-d ubeddel gar (T) d (At M) deg yimizri e →i deg kra n yimyagen

timnađin-a kif kif d (At M) deg yiwen n umyag deg yimzri

deg ibaw kif kif timnađin-a d (At M)

➤ **talya r₁ar₂r₂ (At M: 05), (T: 03), (BM: 03)**

- tamnađt n (At M): yella-d ubeddel deg 03 n yimyagen deg yimizri s temlellit n teyra a→u **md:** εass →εuss

yella-d ubeddel deg 01 n umyag s temlellit n teyra a→u deg ibaw

Md: qass →qass →quss

- tamnađt n (T): deg yimizri d ibaw yella-d ubeddel deg yimyagen-a s temlellit n teyra u→a

Md: fukk →fakk →fakk

- tamnađt n (BM): $r_1ar_2r_2 \rightarrow r_1ur_2r_2$
 ulac abeddel deg yimizri d ibaw
Md: xuss \rightarrow xuss \rightarrow xuss
 - aserwes n temnađin yer (At M)
 ger (T) d (At M) yella-d ubeddel deg yimizri d ibaw
 u \rightarrow a
 ma d tamnađt n (BM) tbeddel akk talya n yimyagen
 $r_1ar_2r_2 \rightarrow r_1ur_2r_2$
- **talya $r_1er_2r_2$ (At M: 09), (T:04), (BM: 03)**
 - tamnađt n (At M): yellad ubeddel deg 02 n yimyagen deg yimizri s tmerna n a yer taggara **md:** ħerr \rightarrow ħerra \rightarrow ħerr
 - tamnađt n (T): yella-d ubeddel deg 02 n yimyagen s temlellit n teyra e \rightarrow i deg ibaw
Md: becc \rightarrow becc \rightarrow bicc
 - tamnađt n (BM): yella-d ubeddel deg 01 n umyag deg yimizri d ibaw s tmerna n "a" yer taggara **md:** yezz \rightarrow yezza \rightarrow yezza
 - aserwes n temnađin yer (At M)
 yella-d ubeddel deg ibaw n (T) e \rightarrow i
 ma d ibaw n (BM) timerna n a yer taggara
- **talya $r_1ir_2r_2$ (At M: 07), (T:05), (BM: 04)**
 - tamnađt n (At M): yella-d ubeddel deg 05 n yimyagen deg yimizri s temlellit n teyra i \rightarrow a **md:** qirr \rightarrow qarr \rightarrow qarr
 deg ibaw yella-d ubeddel deg 02 n yimyagen s temlellit n teyra i \rightarrow a **Md:** qiss \rightarrow qass \rightarrow qass
 - tamnađt n (T): yella-d ubeddel deg 01 n umyag s temlellit n teyra i \rightarrow u deg yimizri d ibaw
Md: bibb \rightarrow bubb \rightarrow bubb
 Yella-d ubeddel deg 01 n umyag s temlellit n teyra i \rightarrow a deg yimizri d ibaw
Md: ĩill \rightarrow ĩall \rightarrow ĩall
 - tamnađt n (BM): deg yimyagen-a yella-d ubeddel deg yimizri s temlellit n teyra i \rightarrow a

Md: ʧill →ʧall

Deg yimyagen-a yella-d ubeddel deg ibaw s temlellit n teyra i →a

Md: ħibb →ħibb →ħabb

- aserwes n temnađın yer (At M)

(T) temgarad yef (At M) deg yimizri d ibaw deg yiwen n umyag i→u, ma yella d tamnađt n (BM) kif kif akked (At M)

➤ **talya r1er2r3i(At M: 04), (T:03), (BM: 03)**

- tamnađt n (At M): yella-d ubeddel deg 03 n yimyagen deg yimizri s temlellit n teyra i→a

Md: cetki →cetka

01 n umyag deg ibaw s temlellit n teyra i→a

Md: sedħi →sedħa →sedħa

- tamnađt n (T): yella-d ubeddel deg yimyagen-a s temlellit n teyra i→a deg yimizri d ibaw

Md: cedhi →cedha →cedha

- tamnađt n (BM): yella-d ubeddel d yimyagen-a s temlellit n teyra i→a deg yimizri d ibaw **md:** cetki →cetka →cetka

- aserwes n temnađın yer (At M)

timnađın-a kif kif deg yimizri d ibaw akked (At M)

➤ **talya r1ir2r3i(At M: 01), (T:01), (BM:00)**

- tamnađt n (At M): yella-d ubeddel deg umyag-a s temlellit n teyra i→u, i→a deg ibaw **md:** cihwi →cihwi →cuhwa

- tamnađt n (T): yella-d ubeddel deg umyag-a deg yimizri d ibaw s temlellit n teyra i→a

Md: cihwi →cihwa →cihwa

- tamnađt n (BM): ulac imyagen s talya-a

- aserwes n temnađın yer (At M)

amyag-a yemgarad yef (At M) deg yimizri d ibaw i→a

ma (BM) ur semrasen ara amyag-a

➤ **talya r₁r₁ar₂i**(At M: 03), (T:03), (BM: 02)

- tamnađt n (At M): yella-d ubeddel deg yimizri s temlellit n teyra a→u

Md: ddari →dduri

- tamnađt n (T): yella-d ubeddel deg yimizri d ibaw s temlellit n teyra a→u, i→a **md:** ggađi →gguđa →gguđa

- tamnađt n (BM): **r₁r₁ar₂i** → **r₁r₁ur₂i**

ulac abeddel deg tmezra yella-d ubeddel deg talya

- aserwes n temnađin yer (At M)

yella-d umgired ger (T) d (At M) deg yimizri d ibaw i→a

ma d amgired ger (BM) d (At M) yella-d deg talya **r₁r₁ar₂i** → **r₁r₁ur₂i**

➤ **talya ir₁r₁ir₂** (At M: 02), (T: 02), (BM: 01)

- tamnađt n (At M): yella-d ubeddel deg yimizri s temlellit n teyra i→u/a, tikksa n tussda, timerna n tergalt taneggarut yer taggara

Md:irriq →urqaq

Yella-d ubeddel deg yimizri ayelluy n i yer tazwara s temlellit n teyra i→ø/e md: **issin** →ssen

- yella-d ubeddel deg 01n umyag deg ibaw s uyelluy n i deg tazwara

Md:issin →ssen →ssin

tamnađt n (T): yella-d ubeddel deg 01 n umyag deg yimizri s uyelluy n teyra i deg tazwara d temlellit n teyra i→e, Deg ibaw yella-d ubeddel s uyelluy n i

Md:issin →ssen →ssen

tamnađt n (BM): yella-d ubeddel deg 01 n umyag deg yimizri s uyelluy n teyra i deg tazwara d temlellit n teyra i→e, Deg ibaw yella-d ubeddel s uyelluy n i

Md:issin →ssen →ssen

- aserwes n temnađin yer (At M)

timnađın-a mgaraden yer (At M) deg yimizri $i \rightarrow \emptyset$,
 $i \rightarrow e$

ma deg ibaw timnađın-a kif kif d (At M)

➤ **talya ir₁ir₂ir₃ (At M: 28), (T:21), (BM: 13)**

- tamnađt n (At M): yella-d ubeddel s temlellit n teyra deg yimizri

- (05) $i \rightarrow \emptyset$: **ibnin** \rightarrow **bnin**

- (04) $i \rightarrow \emptyset/e$: **ibrik** \rightarrow **brek**

- (06) $i \rightarrow u/a$: **ifrir** \rightarrow **ufrar**

- (03) $i \rightarrow \emptyset/a$: **ihriw** \rightarrow **hraw**

- (01) $i \rightarrow \emptyset/a$, $\emptyset \rightarrow e$ d tussda n tergalt talem mast:

ilqiq \rightarrow **leqqaq**

- (02) $i \rightarrow \emptyset/a$, $\emptyset \rightarrow e$, $w \rightarrow gg^w$: **ilwiy** \rightarrow **legg^way**

- (02) $i \rightarrow \emptyset$, $\emptyset \rightarrow e$, $z \rightarrow zz$: **iy^wzif** \rightarrow **y^wezzif**

- (01) $i \rightarrow a$, $\emptyset \rightarrow e$, $r \rightarrow rr$: **iwriy** \rightarrow **werray**

Yella-d ubeddel deg 10 n yimyagen deg ibaw s uyelluy n teyra $i \rightarrow \emptyset$ **md:ibnin** \rightarrow **bnin** \rightarrow **bnin**

Yella-d ubeddel deg 01 n umyag s temlellit n teyra $i \rightarrow \emptyset/a$

Md:iksin \rightarrow **ksan** \rightarrow **ksan**

- tamnađt n (T): yella-d ubeddel deg 20 n yimyagen s temlellit n teyra deg yimizri d ibaw

Md:

- (05) $i \rightarrow \emptyset$: **ibnin** \rightarrow **bnin** \rightarrow **bnin**

- (03) $i \rightarrow \emptyset$, tussda n tergalt talem mast: **ibrik** \rightarrow **berrik**
 \rightarrow **berrik**

- (01) $i \rightarrow u$, $i \rightarrow a$: **ifrir** \rightarrow **ufrar** \rightarrow **ufrar**

- (06) $i \rightarrow \emptyset$, $i \rightarrow u$: **ihriw** \rightarrow **hraw** \rightarrow **hraw**

- (05) $i \rightarrow \emptyset$, $i \rightarrow e$: **ilwiy** \rightarrow **lwey**

- tamnađt n (BM): yella-d ubeddel deg 06 n yimyagen deg yimizri

- $i \rightarrow \emptyset, \emptyset \rightarrow a$: **ibrik** \rightarrow **barik**
- (02) $i \rightarrow a, i \rightarrow \emptyset$: **ikniw** \rightarrow **knaw**
- $i \rightarrow e, i \rightarrow \emptyset$: **irxis** \rightarrow **rxes**
- (02) $i \rightarrow \emptyset, \emptyset \rightarrow e$, tussda n tergalt talem mast: **iwriy** \rightarrow **werriy**

Deg ibaw yella-d ubeddel deg 03 n yimyagen

- (02) $i \rightarrow \emptyset, \emptyset \rightarrow e$, tussda n tergalt talem mast: **izdig** \rightarrow **zeddig** \rightarrow **zeddig**
- (01) $\emptyset \rightarrow a$: **ibrik** \rightarrow **barik** \rightarrow **barik**

- Aserwes n temnađin yer (At M)

Yella-d umgired ger (T) d (At M) deg yimizri $i \rightarrow \emptyset$ akked tussda n tergalt talem mast deg krađ n yimyagen, llan diy sđid n yimyagen mgaraden yef (At M) $i \rightarrow \emptyset/u$

Ma d imyagen id yeqqimen kif kif-iten d (At M)

Ma d (BM) yella-d umgired d (At M) deg sin n yimyagen deg yimizri $i \rightarrow a/\emptyset$

Ma d ibaw (T) temgarad yef (At M) $i \rightarrow \emptyset +$ tussda n tergalt talem mast. $i \rightarrow u/a, i \rightarrow \emptyset/u, i \rightarrow \emptyset/u$

(t) kif kif d (at m) $i \rightarrow \emptyset$ deg 05 n yimyagen

(BM) temgarad yef (At M) deg ibaw $i \rightarrow \emptyset/e +$ tussda n tergalt talem mast deg sin n yimyagen, yella- d umgired deg yiwen n umyag $\emptyset \rightarrow a$ deg ibaw.

2.2. Aėeddi seg umyag aħerfi yer urmir d ussid

- **tamawt:** aħerfi = urmir deg Tezmalt d At Mangellat ma deg temnađt n Burğ Mira llan kra n yimyagen bedden deg urmir
- **tamawt:** urmir ussid n Tezmat d At Mangellat yettwasiley s tt—

ma deg Burğ Mira yettwasiley s t—

➤ **talya er₁r₂er₃/r₁r₂e₃r** (At M: 742), (T:397), (BM: 367)

- tamnađt n (At M): - yella-d ubeddel deg 641 n yimyagen deg ussid s tussda n tergalt talem mast

Md: bdeε →bdeε →beddee

- yella-d ubeddel deg 16 n yimyagen deg ussid d→tt

Md: cdeħ →cdeħ →cetteħ

- yella-d ubeddel deg 03 n yimyagen deg ussid b →a

Md: bges →bges →ttages

- yella-d ubeddel deg 01 n umyag deg ussid b →a d tussda n tergalt taneggarut **Md:** bded →bded →ttadedd

- yella-d ubeddel deg 60 n yimyagen s temlellit n teyra e→a

Md: bhet →ttebhat

- yella-d ubeddel deg 07 n yimyagen ɣ →qq

enyec →nyec →neqqec

- yella-d ubeddel deg 03 n yimyagen w→gg

Md: rwel →reggel

- yella-d 01 n umyag ibeddel s temlellit n teyra e →i

Md: rxes →rxes →ttirxis

- yella-d 01 n umyag ibeddel s tussda n tergalt tamezwarut d temlellit n teyra e →a

Md: syel →syel →ssyal

- yella-d 01 n umyag ibeddel s tussda n tergalt talem mast d temlellit n teyra e →i

Md: smed →smed →ttsemmid

- tamnađt n (T)

- yella-d ubeddel deg 183 n yimyagen s temlellit n teyra deg ussid e →a
Md: bded →bdeđ →ttebdad
- yella-d ubeddel deg 173 n yimyagen s tussda tergaltn talem mast
Md: bħet →bħeđ →ttbeħhit
- yella-d ubeddel deg 10 n yimyagen s temlellit n teyra e→i
Md: byeđ →byeđ →ttibyid
- yella-d ubeddel deg 15 n yimyagen đ→tđ
Md: cđef →cđeđ →cettđef
- yella-d ubeddel deg 09 n yimyagen s→tt
Md: fsed →fsed →fetted
- yella-d ubeddel deg 01 n umyag đ→dd
Md: hđer →hđeđ →hedder
- yella-d ubeddel deg 06 n yimyagen w→gg
Md: ħwes →ħweđ →ħegges
- tamnađt n (BM) : yella-d ubeddel deg 01 n umyag deg urmir s temlellit n teyra e →i **md:** frez →friz
 - yella-d ubeddel deg 306 n yimyagen deg ussid s tussda n tergaltn talem mast **md:** nqes →nqeđ →neqqes
 - yella-d ubeddel deg 05 n yimyagen s tussda n tergaltn talem mast d temlellit n teyra e→a
Md: nqer →nqeđ →neqqar
 - yella-d ubeddel deg 24 n yimyagen s temlellit n teyra e →a
Md: nzef →nzef →tenzaf
 - yella-d ubeddel deg 24 n yimyagen s temlellit n teyra e →i d tussda n tergaltn talem mast
md: nfes →nfeđ →tneffis

- yella-d ubeddel deg 01 n umyag e→i, ø→a , tussda n tergalt talem mast
Md: bæed →bæed →tbææid
- yella-d ubeddel deg 01 n umyag e/ø→a, tussda n tergalt talem mast **md:** tlem →tlem →tallam
- yella-d ubeddel deg 01 n umyag e→a timerna n ay yer taggara , tussda n tergalt talem mast
Md: sker →sker →skarray
- yella-d ubeddel deg 01 n umyag e→i, ø→a, tussda n tergalt talem mast **md:** krec →krec →tkarric
- yella-d ubeddel deg 01 n umyag a/e →u, z→zz
Md:εazeg →εazeg →tεuzzug
- yella-d ubeddel deg 05 n yimyagen e→a, ø→a
Md:εceq →εceq →taεcaq
- yella-d ubeddel deg 01 n umyag e→i
Md: zwey →zwey →tezwiy
- yella-d ubeddel deg 01 n umyag ø→u , ε →εε
Md: kæec →kæec →kuεæec
- aserwes n temnađin yer (At M)
 - (T) temgarad yef (At M) deg yiwen n umyag s→tt, temgarad deg sin n yimyagen đ→dd
 - (BM) temgarad yef (At M):
Tussda n tergalt talem mast+ e→a
e→i + ø→a + tussda n tergalt talem mast
e/ø→a + tussda n tergalt talem mast
e→a + timerna n ay yer taggara + tussda n tergalt talem mast
e→i + ø→a + tussda n tergalt talem mast
a/e →u + z→zz
e/ø →a
ø→u
 - (T) kif kif d (At M) đ→tt
 - (BM) kif kif (At M) tussda n tergalt talem mast + e→i

Timnađın-a kif kif d (At M) deg tussda n tergalt
talem mast + e → a/i

➤ **talya r₁r₁r₃i (At M: 01), (T:01), (BM: 01)**

- Tamnađt n (At M): deg ussid ibeddel umyag-a s tukksa n tussda

Md: **dd**εi → **dd**εi → **tted**εi

- Tamnađt n (T): **r₁r₁r₃i** → **r₁r₁r₃u**

ibeddel umyag-a s tussda n tergalt n uzar d uyellut n yiwet n
terglt d → e, ε → εε

Md : **dd**εu → **dd**εu → **deεε**u

- Tamnađt n (BM) : yella-d ubeddel deg urmır s temlellit n teyra i → u

Yella-d ubeddel deg ussid s temlellit n teyra i → u, ø → a,
ε → εε

Md : **dd**εi → **dd**εu → **ddaεε**u

- Aserwes n temnađın yer (At M)

(T) temgarad yef (At M) deg ussid deg talya **r₁r₁r₃i** → **r₁r₁r₃u**

(BM) temgarad yef (At M) deg urmır i → u, deg ussid
i → u + ø → u + tussda n tergalt talem mast

➤ **talya r₁r₁ur₂ (At M: 01), (T: 01), (BM: 01)**

- Tamnađt n (At M): yella-d ubeddel deg ussid s tukksa n tussda n tergalt tamezwarut d tmerna n teyra u yer taggara

Md: xxuc → xxuc → **ttxucu**

- tamnađt n (T): yella-d ubeddel deg ussid s tussda n tergalt taneggarut d tmerna n u yer taggara **md**: xxuc → xxuc → **ttxxuccu**

- tamnađt n (BM): ulac abeddel deg umyag-a

- aserwes n temnađın yer (At M)

(T) temgarad yef (At M) deg tussda n tergalt
taneggarut

(BM) temgarad yef (At M) deg uyelluy n teyra "u" yer taggara

➤ **talya r₁ar₂er₃ (At M: 61), (T:32), (BM: 33)**

• tamnađt n (At M):

- yella-d ubeddel deg 54 n yimyagen deg ussid s temlellit n teyra e→a

Md: badeε →badeε →ttbadaε

- yella-d ubeddel deg 05 n yimyagen s tussda n tergalt tamezwarut akked temlellit n teyra e→a

Md: careε →careε →ccaraε

- yella-d ubeddel deg 01 n umyag s tussda n tergalt tamezwarut d tlemmast

Md: cafeε →cafeε →ccaffeε

- yella-d ubeddel deg 01 n umyag s tussda n tergalt talemast d temlellit n teyra a→e

Md: hazem →hazem →hezzem

• tamnađt n (T): yella-d ubeddel deg yemyagen akkk n urmir ussid s temlellit n teyra e→a

Md: barek →barek →ttbarak

• tamnađt n (BM): yella-d ubeddel deg ussid s tussda n tergalt talemast deg 02 n yimyagen d temlellit n teyra a→e

Md: badeε →badeε →beddeε

Yella-d ubeddel deg 30 n yimyagen s temlellit n teyra e→a

Baṭen →baṭen →tbaṭan

Yella-d ubeddel deg 01 n umyag s tussda n tergalt tamezwarut d→dd d temlellit n teyra e→a

Md: dafε →dafε →ddafaε

○ aserwes n temnađin yer (At M)

timnađin-a kif kif d (At M) deg ussid e→a

(BM) kif kif d (At M) e→a +tussda n tergalt

tamezwarut, a→e + tussda n tergalt talemast

tussda n tergal tamezwarut akked tneggarut anecta
yella kan yer (At M) ulac-it yer temnađin-nniđen deg
talya-a

➤ **talya r₁er₂r₂i (At M: 41), (T:25), (BM:16)**

- tamnađt n (At M): yella-d ubeddel deg ussid deg 02 n
yimyagen s tussda n tergal tamzewarut c→cc

Md:cebbi →cebbi →ccebbi

- tamnađt n (T) yella-d ubeddel deg 01 n umyag deg ussid s
tmerna n (ay) yer taggara-s

Md:eeddi →eeddi →ttēeday

- tamnađt n (BM): yella-d ubeddel deg ussid deg 03 n
yimyagen

- i→a: henni →henni →thenna

- i→ay: eeddi →eeddi →tēeday

- i→ay, tukksa n tussda: eelli →eelli →teelay

- aserwes n temnađin yer (At M)

(T) temgarad yer (At M) s tmerna n "ay" yer taggara

(BM) temgarad yer (At M) i→a, i→ay, i→ay+ tukksa
n tussda n tergal talemast

Tussda n tergal tamezwarut tella kan yer (At M) ulac-
it yer temnađin-nniđen deg talya-a

➤ **talya r₁r₁ar₂ (At M: 10), (T:08), (BM: 07)**

- tamnađt n (At M): yella-d ubeddel deg 08 n yimyagen deg
ussid

- 07 n yimyagen s tukksa n tussda n tergal
tamezwarut

Md:bbah →bbah →ttbah

- qq→y: qqar →qqar →ttyar

- tamnađt n (T): yella-d ubeddel deg 02 n yimyagen deg ussid
ø→a

Md:ggağ →ggağ → ttggağa.

qq→y: qqar →qqar →ttyar

- tamnađt (BM): yella-d ubeddel deg 02 n yimyagen deg ussid s tmerna n "ay" yer taggara **md**: ččar →ččar →ččaray

yella-d ubeddel deg 01 n umyag qq→y, ø→a

Md:qqar →qqar →tyara

Yella-d ubeddel deg01 n umyag s tmerna n "a" yer taggara

Md: ggaj →ggaj →tggaja

- **tamawt**: yella yiwen n umyag ibeddel talya deg temnađt-a **r₁r₁ar₂** → **r₁r₁ur₂**

Md: ellaz (At M) →lluz →lluz→tlaz (BM)

Deg ussid ibeddel umyag-a s temlellit n teyra u→a d tukksa n tussda

- aserwes n temnađin yer (At M)

(T) temgarad yef (At M) ø→u

(BM) temgarad yef (At M) s tmerna n "ay" yer taggara, timerna n "a" yer taggara

- yella yiwen n umyag ibeddel talya deg (BM) **r₁r₁ar₂** → **r₁r₁ur₂**

timnađin-a kif kif d (At M) qq →y

tukksa n tussda n tergalt tamezwarut tella kan yer (At M) ulac-it yer temnađin-nniđen

➤ **talya r₁er₂r₂ (At M:09), (T: 04), (BM: 03)**

- tamnađt n (At M): yella-d ubeddel deg 05 n yimyagen deg ussid

- timerna n i yer taggara: y^weđđ →y^weđđ →tty^weđđi

- tussda n tergalt tamezwarut akked tmerna n iq yer taggara: ceqq →ceqq →cceqqiq

- timerna n i d tergalt tis snat yer taggara deg 03 n yimyagen gell →gell →ttgellil

- tamnađt n (T): yella-d ubeddel deg ussid

- timerna n i d tergalt tis snat yer taggara deg 02 n yimyagen

Md: becc →becc →tbeccic

- (02) e→∅, ∅→a : bedd →bedd →ttebdad

- tamnađt n (BM): yella-d ubeddel deg yimyagen-a deg ussid

- timerna n i d tergalt tis snat yer taggara

Md: becc →becc →tbeccic

- e→a, timerna n ad yer taggara md:bedd →bedd →tbaddad

- timerna n az yer taggara md: yezz →yezz →yezzaz

- aserwes n temnađin yer (At M)

(T) temgarad yef (At M) e→∅, ∅→a

(BM) temgarad yef (At M) e→a + timerna n "d" yer taggara, ∅→a, timerna n "az" yer taggara

Timnađin-a kif kif d (At M) s tmerna n "i" d tmerna n tergalt tis snat yer taggara

Timerna n "i" yer taggara, tussda n tergalt tamezwarut d tmerna n "iq" yer taggara aya yella kan yer (At M)

ulac-it yer temnađin-nniđen

➤ **talya er₁r₂ir₃/r₁r₂ir₃ (At M: 08), (T:03), (BM: 04)**

- tamnađt n (At M): yella-d ubeddel deg 02 n yimyagen deg ussid s tmerna n i yer taggara

Md: ektil →ktil →ttektili

yella-d ubeddel deg 01 n umyag w→gg md: ezwir →zwir →zeggir

- tamnađt n (T): yella-d ubedel deg yimyagen-a s tmerna n (i) yer taggara n ussid

Md: ħwiğ →ħwiğ →ttiħwiği

- tamnađt (BM):

- tamawt: er₁r₂ir₃→ er₁r₂ar₃ tbeddel talyadeg 02 n yimyagen

ehwij (At M) →hwaj(BM), ektil (At M) →ktal (BM)

- yella-d ubeddel deg 01 n umyag s temlellit n teyra
∅→e, i→e , t→tt **md:** rtiħ →rtiħ →retteħ

- aserwes n temnađın yer (At M)
 ulac amgired yer (T) d (At M) deg talya-a
 (BM) temgarad deg talya yef (At M) deg sin n
 yimyagen **er₁r₂ir₃→er₁r₂ar₃**
 (T) kif kif d (At M) s tmerna n "i" yer taggara
 W →gg yella kan yer (At M) ulac-it deg temnađın-
 nniđen deg talya-a

➤ **talya r₁ir₂er₃ (At M: 09), (T:08), (BM: 05)**

- tamnađt n (At M): yella-d ubeddel deg 08 n yimyagen deg
 ussid s temlellit n teyra i→a, e→a md: **ħiwel →ħiwel**
 →tthawal

yella-d ubeddel deg 01 n umyag s tussda n tergalıt tamezwarut
 c→cc akked temlellit n teyra i→a, e→a md: **ciwer →ciwer**
 →ccawar

- tamnađt n (T): yella-d ubeddel deg ussid s temlellit n teyra
 i→a deg yemyagen akk

Md: ciwer →ciwer →ttcawar

- tamnađt (BM):
 - tamawt: yella-d ubeddel deg talya deg 04 n yimyagen
r₁ir₂er₃→r₁ar₂er₃ md: ciwer (At M) →cawer (BM)
 deg 04 n yimyagen-a yella-d ubeddel deg ussid s
 temlellit n teyra e→a **md:** cawer →cawer →tcawar
 yella-d ubeddel deg 01 n umyag deg urmır d ussid s
 temlellit n teyra i→a, e→a
md: ħiwec →ħawec →thawac

- aserwes n temnađın yer (At M)
 (T) temgarad yef (At M) s i→a
 - (BM) temgarad yef (At M) deg talya deg 04 n
 yimyagen
r₁ir₂er₃→r₁ar₂er₃
 (BM) temgarad yef (At M) deg urmır deg yiwen n
 umyag i →a

➤ **talya r₁er₂r₃i (At M07), (T: 03), (BM: 03)**

- tamnađt n (At M): 04 n yimyagen yella-d ubeddel deg ussid s tussda n tergalt tamezwarut d temlellit n teyra i→a

Md:cedhi →cedhi →ccedha

temlellit n teyra i→a tussda n tergalt d tmerna n y yer taggara

Md:serbi →serbi →sserbay

yiwen n umyag đ→t **md:** sedđhi→sedđhi→ttsethi

- tamnađt n (T) : ulac abeddel deg yimyagen-a
- tamnađt n (BM): yella-d ubeddel deg 01 n umyag s tmerna n ay yer taggara **Md:** cetki →cetki →tcetka

- aserwes n temnađin yer (At M)

(BM) temgarad yef (At M) s tmerna n "ay" yer taggara
Tussda n tergalt tamezwarut + i→a, i→ay + tussda n
tergalt tamezwarut, đ →t aya akk yella kan yer (At M)
ulac-it yer temnađin-nniđen

➤ **talya r₁ur₂er₃ (At M: 04), (T:03), (BM: 02)**

- tamnađt n (At M): yella-d ubeddel deg yimyagen-a s temlellit n teyra e→u deg ussid **md:** buħef →buħef →ttbuħuf

02 n yimyagen yella-d ubeddel deg-sen s tussda n tergalt tamezwarut

Md: zuzen →zuzen →zzuzun

- tamnađt n (T): 02 n yimyagen yella-d ubeddel deg ussid s temlellit n teyra e→u

Md: muqel →muqel →ttmuqul

- tamnađt (BM): 02 n yimyagen yella-d ubeddel deg ussid s temlellit n teyra e→u

Md: muqel →muqel →ttmuqul

- aserwes n temnađin yer (At M)

timnađin-a kif kif d (At M) s e→u

tussda n tergalt tamezwarut tella kan yer (At M) ulac-it yer temnađin-nniđen

➤ **talya r₁r₁er₂ (At M: 55), (T:37), (BM: 25)**

- tamnađt n (At M): yella-d ubeddel deg 03 n yimyagen deg ussid s temlellit n teyra e→a d tmerna n a yer tazwara
Md: dden →dden →ttaddan
yella-d ubeddel deg 03 n yimyagen deg ussid s temlellit n teyra e→i d tukksa n tussda n tergalt talemmast
Md: edder →dder →ttidir
yella-d ubeddel deg yiwen n umyag s tukksa n tussda n tergalt tamezwarut d tussda n tergalt tis snat
Md: emmet →mmet →ttmettat
- tamnađt n (T): yella-d ubeddel deg 3 n yimyagen deg ussid s temlellit n teyra e→a
Md: ddem →ddem →ttaddam
yella 01 n umyag ibeddel deg ussid s temlellit n teyra e→i
Md: dder →dder →ttidir
llan 02 n yimyagen bedden tt→gg
Md: ttes →ttes →ggan
- tamnađt (BM): yella-d ubeddel deg 05 n yimyagen deg ussid s temlellit n teyra deg ussid e →a **md:** kker →kker →tekkar
yella-d ubeddel deg 01 n umyag s temlellit n teyra e →u
Md: rrez →rrez →trruz
Yella-d ubeddel deg 01 n umyag s tussda n tergalt talemmast
Md: ltef →ltef →lettef
Yella-d ubeddel deg 01 n umyag s tukksa n tussda n tergalt tamezwarut d tussda n tergalt talemmast
Md: mmet →mmet →tmettat
 - aserwes n temnađin yer (At M)
 - (T) temgarad yef (At M) s e→a, e→i, tt→gg+ e→a
 - (BM) temgarad yef (At M) e→a, e→u, tussda n tergalt talemmast
 - (BM) kif kif d (At M) tukksa n tussda n tergalt tamezwarut, tussda n tergalt tis snat + ø→a + timerna n "t" yer taggara.
 - e→a + timerna n "a" yer taggara, e→i + tukksa n tussda n tergalt talemmast aya yella kan yer (At M) ulac-it yer temnađin-nniđen.

➤ **talya r₁r₂r₂ (At M: 07), (T:05), (BM: 04)**

- tamnađt n (At M): yella-d ubeddel deg 06 n yimyagen s tmerna n teyra i yer taggara **md** : bibb →bibb →ttbibbi

- tamnađt n (T): yella-d ubeddel deg 01 n umyag s temlellit n teyra i→a deg ussid d tmerna n a yer taggara

Md: bibb →bibb →ttbabba

Yella-d ubeddel deg 01 n umyag s tmerna n (ay) yer taggara deg ussid

Md: țill →țill →țallay

Yella-d ubeddel deg 01 n umyag s tmerna n I yer taggara

Md: qirr →qirr →ttqirri

- tamnađt (BM): yella-d ubeddel deg 03 n yimyagen s tmerna n i yer taggara md: ħibb →ħibb →ttħibbi

yella-d ubeddel deg 01 n umyag s tmerniwt n "w" yer taggara

Md: țill →țill →țilliw

- aserwes n temnađin yer (At M)

(T) temgarad yef (At M) s i→a d tmerna n "a" yer taggara, timerna n "ay" yer taggara

(BM) temgarad yef (At M) s tmerna n "w" yer taggara

Timnađin-a kif kif d (At M) s tmerna n "i" yer taggara deg talya-a

➤ **talya ir₁r₂ir₃ (At M:28), (T:21), (BM: 13)**

- tamnađt n (At M): yella-d ubeddel deg 01 n umyag s tussda n tergalt talemast d temlellit n teyra i→ø/e, ø→e

Md: iqriħ →iqriħ →qerreħ

- tamnađt n (T): yella-d ubeddel deg yiwen n umyag deg ussid s tussda n tergalt talemast

Md: izdig →izdig →zeddig

- tamnađt (BM): yella-d ubeddel deg ussid

- (03) i→ø/e, tussda n tergalt talemast

Md:irxis → **irxis** → **rexxes**

- (01) $i \rightarrow \emptyset, \emptyset \rightarrow e$, tussda n tergal talem mast

Md:iyzif → **iyzif** → **yezzif**

- (01) $i \rightarrow \emptyset/e$, tussda n tergal tamezwarut d tlem mast

Md:ikniw → **ikniw** → **kkennew**

- (01) $i \rightarrow e/a$: **ierit** → **ierit** → **teerat**

- Aserwes n temnađın yer (At M)

(T) temgarad yef (At M) s tussda n tergal talem mast kan

(BM) temgarad yef (At M) $i \rightarrow \emptyset$ arnu tussda n tergal talem mast deg yiwen n umyag

(BM) temgarad diyen deg yiwen n umyag $i \rightarrow \emptyset/e$ arnu tussda n tergal tamezwarut d tlem mast

(BM) temgarad diyen $i \rightarrow e/a$ deg yiwen n umyag

(BM) kif kif d (At M) $i \rightarrow \emptyset/e, \emptyset \rightarrow e$ arnu tussda n tergal talem mast

➤ **talya $r_1ur_2r_3i$ (At M1), (T: 1), (BM: 00)**

- tamnađt n (At M): yella-d ubeddel deg ussid s tussda n tergal tamezwarut

Md: jujri → jujri → jjujri

- tamnađt n (T): tbeddel talya n umyag-a **$r_1ur_2r_3i \rightarrow r_1ur_2r_3u$**
ulac abeddel deg ussid
- tamnađt n (BM): ulac amyag-a

- aserwes n temnađın yer (At M)

(T) temgarad yef (At M) deg talya **$r_1ur_2r_3i \rightarrow r_1ur_2r_3u$**

(BM) ulac amyag-a

➤ **talya $r_1r_1ir_2$ (At M02), (T: 02), (BM: 01)**

- tamnađt n (At M): deg ussid yella-d ubeddel deg 02 n yimyagen

- $qq \rightarrow \gamma$: **qqim** → **qqim** → **ttyimi**

- i→a d tmerna n ay yer taggara: zzi_z →zzi_z
→zzazay

- tamnađt n (T): yella-d ubeddel deg ussid
 - qq →y : qqim →qqim →tтыama
 - timerna n i yer taggara : zzi_z→zzi_z →ttzzi_zi
- tamnadt n (BM) : yella-d ubeddel deg ussid qq→y d tmerna n ma yer taggara **md: qqim →qqim →tyimma**

○ aserwes n temnađin yer (At M)

(T) temgarad yef (At M) s tmerna n "i" yer taggara

(BM) temgarad yef (At M) s tussda n tergalt

taneggarut d tmerna n "a" yer taggara

Timnađin-a kif kif d (At M) s qq→y

➤ **talya r₁ar₂r₂ (At M: 05), (T: 03), (BM: 03)**

- tamnađt n (At M): yella-d ubeddel deg yimyagen-a s tmerna n a yer taggara **md: fakk →fakk →ttfakka**
- tamnađt n (T): yella-d ubeddel deg 01 n umyag s tmerna n a yer taggara deg ussid **md: fakk →fakk →ttfakka**
- tamnađt n (BM): **r₁ar₂r₂→ r₁ur₂r₂** yella-d ubeddel deg 02 yimyagen deg urmir s temlellit n teyra u →a **md: xuss →xass**

yella-d ubeddel deg 01 n umyag s temlellit n teyra u→a d

tmerna n a yer taggara deg ussid **md: fukk →fukk →tfakka**

yella-d ubeddel deg 01 n umyag s temlellit n teyra u →a deg ussid

Md: xuss→xass→txass

yella-d ubeddel seg urmir yer ussid deg 01 n umyag s

temlellit n teyra a→u d tmerna n u yer taggara **md: εuss**

→εass →tεussu

○ aserwes n temnađin yer (At M)

(T) d (At M) kif kif

(BM) temgarad yef (At M) deg talya deg urmir

r₁ar₂r₂→ r₁ur₂r₂

➤ **talya r₁ur₂r₂ (At M: 43), (T: 27), (BM: 16)**

- tamnađt n (At M): yella-d ubeddel deg yimyagen-a s tmerna n u yer taggara deg ussid **md**: budd →budd →ttbuddu
- tamnađt n (T) : yella-d ubeddel deg yimyagen-a s tmerna n u yer taggara deg ussid **md**: budd →budd →ttbuddu
- tamnađt n (BM): yella-d ubeddel deg yimyagen-a s tmerna n u yer taggara deg ussid **md**: cuqq →cuqq →ttcuqqu
 - timnađin-a kif kif akked At Mangellat deg ussid deg talya-a

➤ **imyagen iħerfiyen i d-rniy seg temnađin**

Tazmalt: creg, sruh, ketti, nnay, azzay, rfed, sell, serfi, ismid, zger, sseg, suter, aggad, xtir, hucc, eggal, yacc.

Burğ Mira: eebba, ftec, mees, sameħ, laqem, rgagi, qqul, tisiq, şter, sset, weed, cweť, wcem, stađ, tway, seqsi, ssey, lawaħ, smir, tleq, jjer

➤ **inumak i d-nerna seg tamnađin**

Tazmalt: ebreq yer Dallet (briller) ma yella deg Tezmalt (faire male) yettberriq udeddic

edrem yer Dallet (donner un coup dent) ma yella yer Tezmalt (démolir) yedrem uxxam

đrec yer Dallet (être serré) ma yella deg Tezmalt (chasser) ad yesqaqer tiyuzad

Burğ Mira: efreg yer Dallet (enclore) ma yella deg Burğ Mira (entourer) ad zziđ i uyeggad s zzerb

Eħbek yer Dallet (frapper) ma yella deg Burğ Mira (frotter) ħukk

3. igemmađ

Deg taggara n tesleđt-nney nessawed yer kra n yigemmađ nufa-d:

Imyagen iħerfiyen at krađ n tergalin yellan yer Dallet (At Mangellat) 1048 n yimyagen s watug n 100%

❖ **imyagen iħerfiyen bu krađ n tergalin yellan kif kif-iten d**

Dallet d snat n temnađin:

- tamnađt n Tezmalt 720 n yimyagen s ufmidi 68,70%

- tamnađt n Burğ Mira 408 n yimyagen s ufmidi 38,93%

❖ **imyagen iħerfiyen bu krađ n tergalin yemgaraden yer**

Dallet d snat n temnađin:

- tamnađt n Tezmalt 78 n yimyagen s ufmidi 7,44%
- tamnađt n Burğ Mira 614 n yimyagen s ufmidi 58,58%

Seld mi i nexdem tasleđt i yimyagen iħerfiyen at krađ n tergalin nufa-d d akken tuget n yimyagen usan-d s talya taħerfit tagejdant $er_1r_2er_3$ deg yal tamnađt.

Taggrayt tamatut

Taggrayt

Yer taggara n tezrawt-a nessawed yer yigmaḍ i d-yerran yef yisteqsiyen n tazwara, nessebgen-d abeddel i d-yettlin deg uswir n temsislit, abeddel deg talɣiwin n yimyagen iherfiyen seg At Mangellat yer temnaḍin Tazmalt akked Burğ Mira, akken dayen i d-nufa abeddel deg yifeggagen imizri, imizri ibaw d wussid ma yella d urmir ur d-nufi ara abeddel anager deg kra n yimyagen deg temnaḍt n Burğ Mira.

Seg 1048 n yimyagen iherfiyen i d-nugem seg usegzawal n J. M. Dallet nufa-d amgired d umcabi gar At Mangellat d temnaḍin Tazmalt d Burğ Mira, lemgirda tameqqrant tamnaḍt n At Mangellat d tin n Tazmalt ttmeslayen s ḍ ma d Burğ Mira s ṭ am wakken i d-newwi kra n yimyagen d imaynuten ulac-iten deg Dallet, nerna deg tezrawt-a newwed neḥya-d kra n yimyagen qqaren-ten kan lejdud-nney zik.

Deg tesleḍt-a i nga neereḍ ayen akk i wumi nezmer s ttawilat i d ay-yettunefken akken ad nessiweḍ yer yiswi n tezrawt-nney, nessaram newwi-d ayen yesεan azal deg userwes-a, maca iban dakken leqdic yecban wa ilaq-as ad ikemmel deg temnaḍin-nniḍen, imi igmaḍ-a rzan kan kra n temnaḍin.

Adlismuy

Adlismuy

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Ammud

Amyag aherfi bu krađ n tergalin deg temnađt n At Mangellat

amyag aherfi deg Dallet	imizri	imizri ibaw	urmir	ussid	anamek-is s tefransist	asebtar deg Dallet
bubb	bubb	bubb	bubb	ťbubbu	fumer	03
bibb	bubb	bibb	bibb	ťbibbi	charger	03
becc	becc	becc	becc	ťbeccic	uriner	05
bedd	bedd	bedd	bedd	ťbedd/ťbadda/	lever	7
ebded	bđed	bđid	bđed	ťťadedd/	debout	7
budd	budd	budd	budd	ťbudd	favoriser	8
ebder	bder	bdir	bder	ťťader	énoncer	10
ebdee	bdee	bdiε	bdee	beddee	inventer	11
badee	budee	badeε	badee	ťbadæ	inventer	11
bađen	buđen	bađen	bađen	ťbađan	connaitre	12
ebđer	bđer	bđir	bđer	beđđer	tomber	13
ebġes	bġes	bġis	bġes	ťťaġes	ceindre	14
ebhet	bhet	bhet	bhet	ťťebhat	s étonner	16
bbaĥ	bbaĥ	bbaĥ	bbaĥ	ťbaĥ	être gentil	16
buĥef	buĥef	buĥef	buĥef	ťbuĥuf	errer	16
ebĥet	bĥet	bĥit	bĥet	ťťebĥat	chercher	18
ebjeh	bjeh	bjeh	bjeh	bejjeh	ouvrir	19
ebley	bley	bliy	bley	belley	être adulte	24
ebleε	bleε	bliε	bleε	belleε	avalér	27
ibnin	ibnin	ibnin	ibnin	ťťibnin	saveurer	28
bbey	bby	bbiy	bbey	tebbey	Plonger	31
eby ^{wed}	by ^{wed}	by ^{wid}	by ^{wed}	beyy ^{wed}	Jalouser	32
eby ^{wel}	by ^{wel}	by ^{wil}	by ^{wel}	beyy ^{wel}	être jaloux	32
beqqi	beqqi	beqqi	beqqi	ťbeqqi	revoir	33
bber	bber	bbir	bber	tebber	prélever	36
berri	berra	berri	berri	ťberri	désintéresser	37
ebrec	brec	bric	brec	berrec	Ecraser	40
ebred	bred	brid	bred	berred	être aiguisé	41
ebred	bred	brid	bred	berred	être froid	41
ebređ	bređ	briđ	bred	berređ	avoir la diarrhée	43
ebrek	brek	brik	brek	berrek	s'accroupir	45
barek	burek	barek	barek	ťbarak	Bénir	45
ibrik	brek	ibrik	ibrik	ťťibrik	noirsir	46
ebren	bren	brin	bren	berren	Rouler	47
ebreġ	breġ	briġ	breġ	berreġ	Briller	48
ebreġ	breġ	briġ	breġ	berreġ	s'affaisser	51
ebrez	brez	briz	brez	berrez	nettoyer	51
ebťel	bťel	bťil	bťel	beťťel	abrogr	56
ebx ^{wel}	bx ^{wel}	bx ^{wil}	bx ^{wel}	bexx ^{wel}	paresser	58

ebx ^w eş	bx ^w eş	bx ^w iş	bx ^w eş	bexx ^w eş	être avili	59
ebbež	bbež	bbiž	bbež	tebbež	Plonger	61
ebzed	bzed	bziđ	bzed	bezzed	Pisser	62
ebzeg	bzeg	bzig	bzeg	ṭtazeg	mouiller	62
ebzer	bzer	bzir	bzer	bezzzer	cotiser	63
ebæed	bæed	bæiđ	bæed	beææed	éloigner	64
ebæet	bæet	bæit	bæet	beææet	Falsifier	67
cebbi	cebba	cebbi	cebbi	ççebbi	comparer	71
ecbeḥ	cbeḥ	cbiḥ	cbeḥ	cebbeḥ	être beau	73
ecbek	cbek	cbik	cbek	cebbek	entrelacer	74
cabek	cubek	cabek	cabek	ççabak	promettre	74
ecbee	cbee	cbië	cbee	cebbëe	rassasier	75
cudd	cudd	cudd	cudd	ççuddu	attacher	75
cedhi	cedha	cedhi	cedhi	ççedhi	désirer	76
ccdę	ccdę	ccid	ccdę	ccdę	glisser	76
ecđef	cedf	cđif	cđef	ceṭṭef	griller	77
ecđeḥ	cđeḥ	cđiḥ	ceđḥ	ceṭṭeḥ	danser	77
eccef	ccef	ccif	ccef	teccef	ruisseler	78
cuff	cuff	cuff	cuff	ççuffu	gonfler	78
ecfeq	cfeq	cfiq	cfeq	ceffeq	échapper	79
ecfeë	cfeë	cfië	cfeë	ceffëe	sauver	80
cafeë	cufeë	cafeë	cafeë	ççafaë	intercéder	80
ecceg	cceg	ccig	cceg	tecceg	glisser	81
cihwi	cihwi	cuhwa	cihwi	ççihwi	désirer	82
ççeḥ	ççaḥ	ççiḥ	ççeḥ	teççeḥ	fâcher	83
eçheđ	çheđ	çheđ	çheđ	ceḥḥeđ	amaigri	83
eçen	ceḥn	çḥin	çen	ceḥḥen	hair	84
cukk	cukk	cukk	cukk	ççukku	soupçonner	84
cetki	cetka	cetki	cetki	ççetki	plaindre	87
eclec	clec	clic	clec	cellec	vider	88
eclex	cllex	clix	cllex	cellex	arracher	93
ecleë	celeë	clië	cleë	cellee	s'intéresser	93
ecmet	cmet	cmiđ	cmet	cemmet	être laid	95
ecmex	cmex	cmix	cmex	cemmex	fabriquer	96
ecneg	cneg	cnig	cneg	cenneg	enfler	98
ecneë	cneë	cnië	cneë	cenneë	raconter	99
ecy ^w eb/e cyeb	ecy ^w eb/ecyeb	cy ^w ib	ecy ^w eb/ ecyeb	ceyy ^w eb	ennuyer	99
ecy ^w el	cy ^w el	cy ^w il	cy ^w el	ceqq ^w el	s'occuper	99
ceqq	ceqq	ceqq	ceqq	ççeqqiq	fendre	100
cuqq	cuqq	cuqq	cuqq	ççuqqu	traverser	100
ččar	ççur	ččar	ččar	ṭṭacar	remplir	103
ecṛeb	çṛeb	çṛib	çṛeb	ceṛṛeb	boire	105
ecṛeđ	çṛeđ	çṛiđ	çṛeđ	ceṛṛeđ	stipuler	106
ecṛeḥ	çṛeḥ	çṛiḥ	çṛeḥ	ceṛṛeḥ	joyeux	108
ecrek	crek	crik	crek	cerrek	associer	108
carek	curek	carek	carek	čcarak	unir	109
ecṛem	çṛem	çṛim	çṛem	ceṛṛem	balafre	110

ecreq	creq	cɾiq	cɾeq	ceɾreq	lever	110
ecrew	crew	criw	crew	ceɾrew	eplucher	111
ecree	cree	crie	cree	ceɾree	larger	111
caɾee	curee	caɾee	caɾee	çcaɾae	juger	112
cetti	cetta	cetti	cetti	ççetti	passer l'hiver	112
ecden	cden	cɾin	cɾen	ceɾten	préoccuper	114
ecɾer	cɾer	cɾir	cɾer	ceɾɾer	être habile	115
ecwed	cwed	cwiɾ	cwed	cegg ^w ed	brûler	116
ciwer	ciwer	cawer	ciwer	çcawar	consulter	117
ecxec	cxec	cxic	cxec	cexxec	captiver	118
ecxem/e cx ^w em	ecxem/ecx ^w e m	cxim	ecxem/ ecx ^w em	cexxem	renifler	119
ecx ^w er	cx ^w er	cx ^w ir	cx ^w er	cexx ^w er	renifler	119
ccuci	ccuci	ccuci	ccuci	ccucuy	chasser	119
cayel	cuyel	cayel	cayel	çcayal	prédire	120
eccef	ccef	ccef	ccef	ceeeef	regretter	122
ecael	cael	cael	cael	ceeeel	allumer	122
dbex	dbex	dbix	dbex	debbex	écraser	130
dafee	dufee	dufee	dafee	ɾdafae	défendre	132
dheb	dheb	dhib	dheb	dehheb	déguerpir	134
dhec	dehc	dhic	dhec	ɾɾedhac	déconcerter	134
dhen	dhen	dhin	dhen	ɾɾedhan	graisser	135
dukk	dukk	dukk	dukk	ddukku	tasser	136
dker	dker	dkir	dker	ɾɾedkar	rappeler	137
dull	dull	dull	dull	ɾdullu	humilier	139
dleg	dleg	dlig	dleg	delleg	mouiller	140
ddem	ddem	ddim	ddem	ɾɾaddam	prendre	141
dden	dden	ddin	dden	ɾɾadan	prierer	145
edneb	dneb	dnib	dneb	ɾɾednab	pécher	146
dnes	dnes	dnes	dnes	dennes	tromper	147
dyel	dyel	dyil	dyel	deyyel	falsifier	149
duqq	duqq	duqq	duqq	dduqqu	tromper	150
edder	dder	ddir	dder	ɾɾidir	vivre	151
edreg	dreg	drig	dreg	derreg	caler	155
edrem	drem	drim	drem	ɾɾedram	donner un coup dent	156
dres	dres	dris	dres	ɾɾedras	lier	157
ddari	dduri	ddari	ddari	ɾdari	s'abriter	158
dree	dree	drie	dree	derree	galoper	159
dwel	dwel	dwil	dwel	dewwel	retourner	162
dxem	dxem	dxim	dxem	dexxem	déformé	165
dyeq	dyeq	dyeq	dyeq	ɾɾedyaq	être étroit	166
ddez	ddez	ddiz	ddez	teddez	piler	167
ddei	ddeai	ddeai	ddei	ɾɾedei	supplier	168
dæen	dæen	dæin	dæen	dæeen	S'abitué	169
edbex	ɾbex	ɾbix	ɾbex	ɾdebbex	cuisiner	172
ɾbee	ɾbee	ɾbee	ɾbee	ɾdebbe	cacheter	172
ɾdudd	ɾdudd	ɾdudd	ɾdudd	ɾɾduddu	désavantager	172

edfer	dfēr	dfīr	dfer	ṭtedfar	suivre	172
edher	dher	dhir	dher	ṭtedhar	paraître	174
ḍill	dall	ḍill	ḍill	ṭdilli	regarder	175
ḍleb	dleb	ḍleb	dleb	ḍelleb	demander	176
edleḥ	dleḥ	ḍliḥ	dleḥ	ḍelleḥ	frotter	176
edlem	dlem	ḍlim	dlem	ḍellem	avoir trot	176
edles	dles	ḍlis	dles	ṭtedlas	tomber	176
ḍumm	dumm	ḍumm	dumm	ṭdummu	balayer	177
edmen	dmen	ḍmin	dmen	ṭtedman	certifier	177
ḍurr	durr	ḍurr	durr	ṭdurru	nuire	177
edreb	dreb	ḍrib	dreb	ḍerreb	frapper	179
ḍrec	drec	ḍric	drec	ṭtedrac	serrer	181
ḍref	dref	ḍrif	dref	ṭtedraf	être poli	181
edreg	dreg	ḍrig	dreg	ḍerreg	salir	181
edreḥ	dreḥ	ḍreḥ	dreḥ	ḍerreḥ	etendre	182
edres	dres	ḍres	dres	ḍerres	être touffu	182
etteṣ	ttes	ṭtis	tteṣ	ṭtatas	dormir	182
ḍaweε	duweε	ḍaweε	ḍaweε	ṭdawae	sconformer	182
ḍæf	dæf	ḍæif	dæf	ṭedæaf	maiger	184
efcel	fcel	fcil	fcel	ṭtefcāl	fatiguer	185
efdeḥ	fdeḥ	fḍiḥ	fdeḥ	ṭtefdaḥ	dénoncer	189
efḍel	fḍel	fḍil	fḍel	ṭtefḍāl	être en règle	192
efḍer	fḍer	fḍir	fḍer	fetter	déjeuner	193
effeg	ffeg	ffig	ffeg	teffeg	être vermoulu	193
efhem	fhem	fhim	fhem	fehhem	comprendre	194
efhec	fhec	fḥic	fhec	fehḥec	être fort	196
efḥem	fḥem	fḥim	fḥem	fehḥem	être dégoûté	197
efjeε	fjeε	fjiε	fjeε	fejjeε	avoir peur	197
fakk	fukk	fakk	fakk	ṭfakka	finir	199
efles	fles	flis	fles	felles	ruiner	199
efnee	fnee	fnie	fnee	fennee	spasser	207
effey	ffey	ffiy	ffey	teffey	sortir	211
efqεε	fqεε	fqiε	fqεε	ṭtefqae	alarmer	211
efffer	ffer	ffir	ffer	teffer	caler	215
furr	furr	furr	furr	ṭfurru	examiner	215
furṛ	furṛ	furṛ	furṛ	ṭfurru	être cuit à la vapeur	216
ifrir	ufrar	frir	ifrir	ṭtifrir	émerger	214
efrec	frec	fric	frec	ṭtefrac	diviser	219
efred	fred	fṛid	fred	ferred	être seul	220
efṛed	fṛed	fṛid	fṛed	ferṛed	balayer	220
efreg	freg	frig	freg	ṭtefrag	enclore	221
efreḥ	fṛeḥ	fṛiḥ	fṛeḥ	ferṛeḥ	réjouir	222
efrek	frek	frik	frek	ferrek	échapper	223
efren	fren	frin	fren	ferren	choisir	225
efrey	frey	friy	frey	ferrey	vider	226
efreq	ferq	friq	freq	ferreq	partager	226

fəreḡ	fureḡ	fəreḡ	fəreḡ	ṭfaraḡ	séparer	228
efres	fres	fris	fres	ferres	nettoyer	227
fəreṣ	fureṣ	fəreṣ	fəreṣ	ṭfaras	profiter	228
frari	frari	frari	frari	ṭṭefrari	répandre	230
efrez	frez	friz	frez	ferrez	séparer	230
efreṣ	frez	friṣ	frez	ferreṣ	clairssire	203
efsed	fsed	fsid	fsed	feṣṣed	détériorer	233
efser	fser	fsir	fser	ṭṭefsar	etendre	234
efsex	fsex	fsix	fsex	feṣṣex	décolorer	234
efteḡ	fteḡ	ftiḡ	fteḡ	fetteḡ	ouvrir	237
eftek	ftek	ftik	ftek	ṭṭeftak	percer	237
eftel	ftel	ftil	ftel	ṭṭeftal	rouler	238
eften	ften	ftin	ften	fetten	préoccuper	239
efteṣ	fteṣ	ftiṣ	fteṣ	ṭṭeftar	déjeuner	239
efṭel	fṭel	fṭil	fṭel	ṭṭeftal	être habile	240
efṭen	fṭen	fṭin	fṭen	fetṭen	être éveillé	241
fuxx	fuxx	fuxx	fuxx	ṭfuxxu	gonfler	241
efxes	fxes	fxis	fxes	fexxes	abimer	243
effeṣ	ffeṣ	ffiz	ffeṣ	teffeṣ	mâcher	244
efeel	feel	fēil	feel	feεel	réaliser	245
ḡaber	ḡuber	ḡaber	ḡaber	ṭḡabar	guetter	248
egdel	gdel	gdil	gdel	geddel	protéger	250
egdem	gdem	gdim	gdem	geddem	faire	250
eg ^w dem	g ^w dem	g ^w dim	g ^w dem	g ^w eddem	renverser	250
ggaj	gguj	ggaj	ggaj	ṭḡaj	décamper	253
ggaji	gguja	ggaji	ggaji	ṭṭeggaji	s'engager	253
gell	gell	gell	gell	ṭgellil	stagner	255
eglez	glez	gliz	glez	gellez	mépriser	258
eg ^w med	g ^w med	g ^w miḡ	g ^w med	g ^w emmed	amasser	261
egmer	gmer	gmir	gmer	gemmer	cueillir	261
eg ^w mez	g ^w mez	g ^w miz	g ^w mez	g ^w emmz	avalier	262
ggani	gguni	ggani	ggani	ṭgani	attendre	265
ḡ ^w rec	ḡ ^w rec	ḡ ^w rac	ḡ ^w rec	ṭṭeḡ ^w rac	mordre	272
ḡren	ḡren	ḡrin	ḡren	ḡerren	facher	275
egres	gres	gris	gres	ṭṭegras	geler	276
ḡareε	ḡureε	ḡareε	ḡareε	ṭḡaraε	s'égalier	278
gg ^w et	gg ^w et	gg ^w it	gg ^w et	tegg ^w et	abonder	279
egzem	gzem	gzim	gzem	ṭṭegzam	couper	282
egzer	gzer	gzir	gzer	gezzer	entailler	283
hubb	hubb	hubb	hubb	ṭhubbu	souffler	285
ehbej	hbej	hbij	hbej	ṭṭehbaj	arracher	285
ehbel	hbel	hbil	hbel	ṭṭehbal	être déraisonnable	285
ehder	hder	hbir	hder	hedder	gratter	286
ehbeṭ	hbeṭ	hbiṭ	hbeṭ	hebbeṭ	descendre	286
hucc	hucc	hucc	hucc	ṭhuccu	secouer	286
hudd	hudd	hudd	hudd	ṭhudd	démolier	287
ehdef	hdef	hdif	hdef	heddef	survenir	287

ehdem	hdem	hdim	hdem	heddem	détruire	287
ehdeṛ	hdeṛ	hdiṛ	hdeṛ	heddeṛ	parler	288
heggi	hegga	heggi	heggi	ṭheggi	préparer	289
hajeṛ	hujer	hajeṛ	hajeṛ	thajar	émigrer	289
ehlek	hlek	hlik	hlek	ṭṭehlak	être malade	290
humm	humm	humm	humm	ṭhumm	heurter	291
ehmej	hmej	hmij	hmej	hemmej	saisir	291
ehmel	hmel	hmil	hmel	hemmel	accourir	291
henni	henna	henni	henni	ṭhenni	laissé tranquille	292
herri	herra	herri	herri	ṭherri	blessé	293
ehṛeb	hṛeb	hṛib	hṛeb	heṛreb	filer	293
ihriw	hraw	hriw	hriw	ṭṭihriw	largir	294
ehter	hter	htir	hter	hetter	être turbulent	294
huzz	huzz	huzz	huzz	ṭhuzzu	secouer	296
ehzel	hzel	hzil	hzel	ṭṭehzal	maigrir	297
ehzem	hzem	hzim	hzem	hezzem	abattre	297
ḥibb	ḥabb	ḥibb	ḥibb	ṭḥibbi	aimer	299
ehḥbek	ḥbek	ḥbik	ḥbek	ṭṭehḥbak	frapper	300
ehḥbel	ḥbel	ḥbil	ḥbel	ḥebbel	faire des beignets	300
ehḥbeq	ḥbeq	ḥbiq	ḥbeq	ḥebbeq	rassembler	301
ehḥbes	ḥbes	ḥbis	ḥbes	ṭṭehḥbas	s'arrêter	302
ḥbes	ḥbes	ḥbes	ḥbes	ṭḥuccu	couper	302
ehḥced	ḥced	ḥcid	ḥced	ḥecced	abâtardir	303
ehḥceṛ	ḥceṛ	ḥceṛ	ḥceṛ	ḥecceṛ	être peiné	304
ehḥdef	ḥdef	ḥdif	ḥdef	ḥeddef	empêcher	305
ehḥdiṛ	ḥdaj	ḥdiṛ	ḥdiṛ	ṭṭehḥdiṛ	avoir besoin	306
ehḥdeq	ḥdeq	ḥdiq	ḥdeq	ḥeddeq	être poli	306
ḥader	ḥuder	ḥader	ḥader	ṭḥadar	précautionner	306
ehḥdeṛ	ḥdeṛ	ḥdir	ḥdeṛ	ḥeddeṛ	présenter	307
ehḥdeṛ	ḥdeṛ	ḥdiṛ	ḥdeṛ	ṭṭehḥdar	assister	308
ehḥdem	ḥdem	ḥdim	ḥdem	ḥettem	sécher	309
ehḥfeḍ	ḥfeḍ	ḥfiḍ	ḥfeḍ	ḥeffeḍ	apprendre	310
ehḥfer	ḥfer	ḥfir	ḥfer	ḥefffer	gratter	311
ehḥjeb	ḥjeb	ḥjib	ḥjeb	ḥejjeb	cacher	312
ḥukk	ḥukk	ḥukk	ḥukk	ṭḥukku	frotter	314
ehḥkem	ḥkem	ḥkim	ḥkem	ṭṭehḥkam	commander	315
ehḥkeṛ	ḥkeṛ	ḥkir	ḥkeṛ	ḥekkeṛ	courtois	315
ehḥlel	ḥlel	ḥlil	ḥlel	ḥellel	être permis	316
ḥull	ḥull	ḥull	ḥull	ṭḥullu/ṭḥull	délayer	317
ehḥleb	ḥleb	ḥlib	ḥleb	ḥelleb	laper	319
ehḥlef	ḥlef	ḥlif	ḥlef	ḥellef/ṭṭehḥlaf	jurer	319
ehḥliṛ	ḥlaj	ḥliṛ	ḥliṛ	ṭṭehḥliṛi/ṭṭehḥliṛ	avoir besoin	320
ehḥlem	ḥlem	ḥlim	ḥlem	ḥellem	être clément	320
ehḥleq	ḥleq	ḥliq	ḥleq	ḥelleq	manger	320
ihḥliw	ḥlew	ihḥliw	ihḥliw	ṭṭihḥliw	être doux	321
ehḥmed	ḥmed	ḥmid	ḥmed	ḥemmed/	remercier	323

				ttehmad		
eħmel	ħeml	ħmil	ħmel	ħemmel/tteħmal	déborder	324
eħmeq	ħmeq	ħmiq	ħmeq	ħemmeq/tteħmaq	s'impatienter	325
eħmer	ħmer	ħmir	ħmer	ħemmer/tteħmar	embarrasser	326
eħmez	ħmez	ħmiz	ħmez	ħemmez	serrer	326
ħunn	ħunn	ħunn	ħunn	ħhunnu	avoir pitié	327
iħnin	ħnin	iħnin	iħnin	ttiħnin	avoir pitié	327
eħnet	ħnet	ħnit	ħnet	ħennet	se parjurer	329
eħnew	ħnew	ħniw	ħnew	ħennew/tteħnaw	étrangler	329
eħqer	ħqer	ħqir	ħqer	ħeqqer	mépriser	330
ħerř	ħerřa	ħerř	ħerř	ħherř/ħherri/ħherřa	acquérir	331
ħareb	ħureb	ħareb	ħareb	ħħarab	être exercé	333
ħareb	ħureb	ħareb	ħareb	ħħarab	protéger	333
eħrec	ħerç	ħric	ħrec	ħerrec/tteħrac	être malin	333
eħreġ	ħreġ	ħriġ	ħreġ	ħerreġ/tteħraġ	entre prendre	335
eħrem	ħrem	ħrim	ħrem	ħerrem/tteħram	être illicite	336
eħren	ħren	ħrin	ħren	ħerren/tteħran	être rétif	338
eħreq	ħreq	ħriq	ħreq	ħerreq/tteħraq	brûler	338
eħreş	ħreş	ħriş	ħreş	ħerreş	serrer	339
eħřet	ħřet	ħřit	ħřet	ħerřet/tteħřat	être dressé	339
eħrez	ħrez	ħriz	ħrez	ħerrez/tteħraz	garder	340
ħess	ħess	ħess	ħess	ħħessis	écouter	340
ħuss	ħuss	ħuss	ħuss	ħħussu	ressentir	341
eħseb	ħseb	ħsib	ħseb	ħesseb/tteħsab	compter	341
ħaseb	ħuseb	ħaseb	ħaseb	ħħasab	souffrir	341
eħsed	ħsed	ħsid	ħsed	ħessed	être jaloux	342
ħasef	ħusef	ħasef	ħasef	ħħasaf	punir	342
eħsen	ħsen	ħsin	ħsen	ħessen	soigner	343
eħşel	ħşel	ħşil	ħşel	ħeşşel/tteħşal	être embarrassante	344
eħtec	ħtec	ħtic	ħtec	ħettec/tteħtac	questionner	344
eħtil	ħtil	ħtil	ħtil	ħeħtil	ruser	344
ħiwec	ħawec	ħiwec	ħiwec	ħħawac	ramasse les résidus	345
eħwiġ	ħwaj	ħwiġ	ħwiġ	ttiħwiġi/tteħwiġ	être besoin	346
ħiwel	ħawel	ħiwel	ħiwel	ħħawal	prendre en grosse	346
eħweş	ħweş	ħwiş	ħweş	ħegg ^w eş	piller	347
ħiwet	ħawet	ħiwet	ħiwet	ħħawat	supplier	347
sedħi	sedħa	sedħ	sedħi	ttişedħi	avoir honte	349
eħzem	ħzem	ħzim	ħzem	ħezzem/tteħzam	presser	351

ħazem	ħuzem	ħazem	ħazem	ṭħazam	contraster	351
eħzen	ħzen	ħzin	ħzen	ħezzen/ṭṭeħzan	être triste	351
ejbed	jebd	jbid	jbed	jebbed/ṭṭejbad / jjebbid	tirer	357
ejber	jber	jbir	jber	jebber	réparer	358
jadel	judel	jadel	jadel	ṭjadal/jjadal	discuter	360
ejder	jder	jdir	jder	jedder	dénigrer	360
ejjed	jjed	jjid	jjed	tejjed	être malade	361
juff	juff	juff	juff	ṭjuffu/jjuffu	détaler	362
ejfel	jfel	jfil	jfel	jeffel	fuir	362
ejhed	jhed	jhid	jhed	jehhed/ṭṭejhad	être fort	363
ejhel	jhel	jhil	jhel	jehhel	être impudent	264
ejher	jher	jhir	jher	jehher	être difficile	264
ejlec	jelc	jlic	jlec	jellec	être charançoné	267
ejlef	jlef	jlif	jlef	jellef	extorquer	267
ejleħ	jleħ	jleħ	jleħ	jelleħ/ṭṭejlah	être râpé	267
ejleq	jelq	jliq	jleq	jelleq	arracher	267
ejjem	jjm	jjim	jjem	tejjem	s'attacher	268
ejmee	jmeē	jmiē	jmeē	jemmee	ramasser	370
ĵaneb	juneb	ĵaneb	ĵaneb	jjaneb	éviter	373
ejneħ	jneħ	jniħ	jneħ	jenneħ	s'émanciper	373
janes	junes	janes	janes	jjanas	fréquenter	373
ejneē	jneē	jnie	jneē	jenneē	produit	374
ejγ ^w em	jγ ^w em	jγ ^w im	jγ ^w em	jeqq ^w em / jeyγ ^w em	boire	375
ejq ^w eṛ	jq ^w eṛ	jq ^w iṛ	jq ^w eṛ	jeqq ^w eṛ	absorber	376
jujri	jujra	jujri	jujri	jjujri	être insupportable	377
jerri	jerra	jerri	jerri	jjerri	offenser	377
ejred	jred	jred	jred	jerred	gratter	379
ejreħ	jerħ	jriħ	jreħ	jerreħ/ṭṭejrah	blessé	380
ejrem	jrem	jrim	jrem	jerrem	être dépourvu	380
ĵaweb	juweb	ĵaweb	ĵaweb	ṭjawab/ĵjawab	répondre	381
ejweĵ	jweĵ	jwiĵ	jweĵ	jewweĵ/ṭṭejwaĵ	marier	382
ejjex	jjex	jjix	jjex	tejjex	être chétif	383
ejeeṛ	jeeṛ	jēiṛ	jeeṛ	jeēeṛ	darder	386
ḱubb	ḱubb	ḱubb	ḱubb	ṭḱubbu/ṭḱubb	couvrir	390
ek ^w bel	k ^w bel	k ^w bil	k ^w bel	k ^w ebbel/ṭṭek ^w bal	être emmitoufler	390
kaber	kuber	kaber	kaber	ṭkabar	respecter	391
ekcef	kcef	kcif	kcef	keçcef/ṭṭekcaf	découvrir	393
ekcem	kcem	kcim	kcem	kçcem/ṭṭekcam	entrer	393
ekfel	kfel	kfil	kfel	keffel/ṭṭekfal	découvert	397

ek ^w fer	k ^w fer	k ^w fir	k ^w fer	k ^w effeŕ/ŕtekk ^w f ar	se révolter	397
ek ^h hes	k ^h hes	k ^h his	k ^h hes	keh ^h hes/ŕtekk ^h ha s	être contraire	400
ekmec	kmec	kmic	kmec	kemmec/ŕtekk mac	froisser	405
ek ^w med	k ^w med	k ^w mid	k ^w med	k ^w emmed/ ŕtekk ^w mad	museler	405
ek ^m mel	k ^m mel	k ^m mil	k ^m mel	kemmel/ŕtekk ^m al	être complet	406
ekmen	kmen	kmin	kmen	kemmen/ ŕtekkman	cacher	406
ek ^w mer	k ^w mer	k ^w mir	k ^w mer	k ^w emmer	pénible	407
ekmes	kmes	kmis	kmes	kemmes/ŕtekk mas	ramasser	407
ekmez	kmez	kmiz	kmez	kemmez/ŕtekk maz	gratter	408
eknef	knef	knef	knef	kennef/ŕtekknaf	cuir	410
ikniw	knaw	ikniw	ikniw	ŕtikniw	être jumeau	411
ekker	kker	kkir	kker	ŕtenkar	se lever	412
k ^u rr	k ^u rr	k ^u rr	k ^u rr	ŕku ^u ru/ŕku ^u rr	voler	414
ekređ	kređ	kriđ	kređ	kerređ	gratter	417
ekref	kref	kriř	kref	kerref/ŕtekkraf	paralyser	417
ek ^w ref	k ^w rif	k ^w rif	k ^w ref	k ^w erref	être natté	418
ekreh	kerh	kriř	kreh	kerreh	détester	418
ekrem	krem	krim	krem	kerrem	favoriser	419
ekres	kres	kris	kres	kerres/ŕtekkras	nouer	420
ekrez	krez	kriř	krez	kerrez/ŕtekkraz	labourer	422
ekkes	kkes	kkis	kkes	tekkes	enlever	422
ekseb	kseb	ksib	kseb	keşseb/ŕtekk ^s ab	posséder	425
iksin	ksan	ksan	iksin	ŕtiksin	être responsable	427
ekteb	kteb	ktib	kteb	ketteb	écrire	427
ek ^w tef	k ^w tef	k ^w tif	k ^w tef	k ^w ettef/ŕtekk ^w ta f	être épaulé par	428
kkaw	kkaw	kkaw	kkaw	ŕkaw/ŕkiw	sécher	429
ektil	ktal	ktil	ektil	ŕtekktili	mesurer	431
ekyes	kyes	kyis	kyes	keyyes	être modeste	431
ek ^e eb	k ^e eb	k ^e ib	k ^e eb	k ^e eeeb	tumeur osseuse	432
ek ^e ec	k ^e ec	k ^e ic	k ^e ec	k ^e eeec	être rabougrir	433
ek ^e er	k ^e er	k ^e ir	k ^e er	k ^e eeer	être rabougri	433
elled	lled	llid	lled	telled	se ratatiner	445
ellef	llef	llif	llef	tellef	masser	445
elfey	lfey	lfiy	lfey	ŕtekk ^l fay	être écrasé	446
elfez	lfez	lfiz	lfez	leffez	mâcher	447
elhet	lhet	lhif	lhet	lehhif	haleter	449
elhem	lhem	lhim	lhem	lehhem/ŕtelha m	cicatriser	451

elheq	lheq	lhiq	lheq	lehheq/țtelhaq	atteindre	451
ellem	llem	llim	llem	tellem	filer	453
lumm	lumm	lumm	lumm	țlummu	blâmer	454
elmed	lmed	lmid	lmed	lemmed	s'habituer	455
elmeĵ	lmeĵ	lmeĵ	lmeĵ	lemmeĵ	être gâté	456
elley	lley	lliy	lley	telley	lécher	458
ely ^w et	ly ^w et	ly ^w it	ly ^w et	leyy ^w et	se cacher	459
ilqiq	leqqaq	ilqiq	ilqiq	țțilqiq	être tendre	459
elqec	lqec	lqic	lqec	leqqec	attraper	461
elq ^w ed	lq ^w ed	lq ^w id	lq ^w ed	leqq ^w ed/țtelq ^w ad	ramasser	461
elqef	lqef	lqif	lqef	leqqef	saisir	462
elles	lles	llis	lles	telles	tondre	463
elseq	lseq	lsiq	lseq	lesseq/țțelsaq	coller	466
elțeh	lțeh	lțih	lțeh	letteh/țțeltah	lécher	466
latem	lutem	latem	latem	țlatam	contraster	466
elțex	letx	ltix	lțex	lettex	aplatir	466
elțec	lțec	lțec	lțec	lețțec	être gentil	466
elțef	lțef	lțif	lțef	lețțef/țțeltaf	être clément	467
ilwiȳ	legg ^w ay	ilwiȳ	ilwiȳ	țțilwiȳ	être lisse	468
ellex	llex	llix	llex	tellex	être aplati	469
elxes	lxes	lxis	lxes	lexxes	être mouillé	470
elxez	lxez	lxiz	lxez	lexxez	jeter	470
ellez	llez	lliz	llez	tellez	être content	471
ellaz	lluz	llaz	llaz	țlaz/țlazay/ țluzuy	avoir fian	471
elzem	lzem	lzim	lzem	lezzem	être obligatoire	472
elεeb	lεeb	lεib	leεb	leεεeb/țtelεab	jouer	473
emced	mced	mciđ	mced	meççed/mecc ed/ țțemcad	speigner	482
emceĥ	mceĥ	mciĥ	mceĥ	meççeh/mecc eh/ țțemcaĥ	lécher	482
emcek	mcek	mcik	mcek	meccek/țțemc ak	enfiler	483
mudd	mudd	mudd	mudd	țmuddu/țmud d	immobiliser	485
emdel	mdel	mdil	mdel	meddel/țțemd al	fermer	486
emger	mger	mgir	mger	megger/țțemg ar	moissonner	489
emĥen	mĥen	mĥin	mĥen	țțemĥan	être peiné	491
emĥeq	mĥeq	mĥiq	mĥeq	mehĥeq/țțemĥ aq	écraser	491
emĥeș	mĥeș	mĥiș	mĥeș	mehĥeș	fouiller	492
emken	mken	mkin	mken	mekken	être possible	494
mmel	mmel	mmil	mmel	temmel	crier	496

emleḥ	mleḥ	mliḥ	mleḥ	melleḥ/ṭṭemlaḥ	être beau	498
emlek	mlek	mlik	mlek	mellek	posséder	499
emleq	mleq	mliq	mleq	melleq	être lisse	500
menni	menna	menni	menni	ṭmenni	souhaiter	503
emneε	mneε	mnie	mneε	menneε	sauver	507
emmey	mmey	mmiy	mmey	temmey	se précipiter	507
muqel	muqel	muqel	muqel	ṭmuqul	regarder	509
emred	mred	mrid	mred	merred	se trainer	514
emreḍ	mreḍ	mriḍ	mreḍ	meṛreḍ/ṭṭemraḍ	agacer	514
emrej	mrej	mrij	mrej	merrej	être encaissé	515
emres	mres	mrīs	mres	ṭṭemras	mettre en tas	517
emret	mret	mrit	mret	merret/ṭmerrit	tracasser	518
emsed	msed	msid	msed	messed	aiguiser	521
emseḥ	mseḥ	msiḥ	mseḥ	meṣṣeḥ/messeḥ/ ṭṭemsaḥ	être effacé	521
emsel	msel	msil	msel	meṣṣel/messel / ṭṭemsaḥ	façonner	522
emsex	msex	msix	msex	meṣṣex	salir	523
emṣeḍ	mṣeḍ	mṣiḍ	mṣeḍ	meṣṣeḍ/ṭṭemṣaḍ	affiler	524
emmet	mmut	mmut	mmet	ṭmeṭṭat	mourir	524
matel	matel	mtil	matel	ṭmatal/mettel	égalier	525
emzel	mzel	mzel	mzel	ṭṭemzal	être égorgé	530
emεen	mεen	mein	mεen	meεεen/ṭṭeme an	être utile	532
enbec	nbec	nbic	nbec	nebbec	piquer	538
enbet	nbet	nbit	nbet	nebbet	bourgeonner	539
enced	nced	ncid	nced	neççeḍ/necced	inviter	539
encef	ncef	ncif	ncef	neççeḥ/neccef/ ṭṭencaf	sécher	540
encel	ncel	ncil	ncel	necceḥ/neççeḥ/ ṭṭencal	être dépouillé	540
enceṛ	nceṛ	nciṛ	nceṛ	neççeṛ/neccer/ ṭṭencar	fendre	540
encew	ncew	nciw	ncew	neccew/ṭṭenca w	être déplumé	541
endef	ndef	ndif	ndef	neddef/ṭṭendaf	être ravivé	542
endeh	ndeh	ndih	ndeh	neddeh/ṭṭenda h	conseiller	543
endem	ndem	ndim	ndem	neddem/ ṭṭendemmay	regretter	544
ender	nder	ndir	nder	nedder/ṭṭendar	gémir	545
endeṛ	ndeṛ	ndiṛ	ndeṛ	neddeṛ	conseiller	545
enned	nned	nniḍ	nned	tenned	enrouler	546
enfed	nfed	nfiḍ	nfed	neffed	jeter	549

enfeg	nfeg	nfig	nfeg	neffeg	jaillir	549
enfeh	nfeh	nfiḥ	nfeh	neffeh	être agréable	550
enfel	nfel	nfil	nfel	neffel/ṭṭnafal	être couvert	550
enfeq	nfeq	nfiq	nfeq	neffeq/ṭṭenfaq	acheter	550
enfer	nfer	nfir	nfer	neffer	être gras	551
enfes	nfes	nfis	nfes	neffes/ṭṭenfas	respirer	552
enfex	nfex	nfix	nfex	neffex/ṭṭenfax	enfler	552
enfez	nfez	nfiz	nfez	neffez	détaler	553
enfeε	nfeε	nfiε	nfeε	neffε/ṭṭenfε	être utile	553
enḡeb	nḡeb	nḡib	nḡeb	neggeb	voiler	555
eng ^w ed	ng ^w ed	ng ^w id	ng ^w ed	negg ^w ed	laper	555
engef	ngef	ngif	ngef	neggef/ṭṭengaf	haleter	555
enḡeh	nḡeh	nḡih	nḡeh	neggeh/ṭṭenḡa ḥ	être déchu	555
eng ^w eh	ng ^w eh	ng ^w ih	ng ^w eh	negg ^w eh	tousser	555
enger	nger	ngir	nger	negger/ṭṭengar	être exterminé	556
naḡes	nuḡes	naḡes	naḡes	ṭnaḡas	bousculer	556
ngugi	ngugi	ngugi	ngugi	ṭṭenguguy/ ṭṭengugay	branler	557
enhel	nhel	nhil	nhel	nehhel	débordé	558
enheq	nheq	nhiq	nheq	nehheq/ṭṭenha q	sangloter	558
enher	nher	nhir	nher	nehher	conduire	558
enhet	nhet	nhit	nhet	nehhet/ṭṭenhat	soupirer	559
enḡel	nḡel	nhil	nḡel	nehhel	récolter	559
enḡes	nḡes	nḡis	nḡes	nehḡes	être jaloux	560
enjem/e nḡem	enjem/enḡem	njim	enjem/ enḡem	nejjem	pouvoir	561
enjer	njer	njir	njer	nejjer/ṭṭenjar	tailler	561
enjeε	njeε	njiε	njeε	nejjee	piquer	562
enḡeb	nḡeb	nkib	nḡeb	nekkeb	être blessé	562
enḡer	nḡer	nkir	nḡer	nekker/ṭṭenkar	renier	562
enḡez	nḡez	nkiz	nḡez	nekkez	être entamé	563
nnal	nnul	nnal	nnal	ṭnal	toucher	564
nnam	nnum	nnum	nnam	ṭnam	être habitué	565
namer	numer	namer	namer	ṭnamar	s'entêter	565
enḡeb	nḡeb	nḡib	nḡeb	neyḡeb/neqqe b	becqueter	568
enḡec /enqec	enḡec /enqec	nḡic	enḡec /enqec	neqqec/ṭṭenḡa c	piocher	568
enḡ ^w ec	enḡ ^w ec	enḡ ^w ec	enḡ ^w ec	neqq ^w ec	froncer	568
enḡed / enqed	nḡed	nḡid	enḡed / enqed	neqqed/neḡḡe d/ ṭṭenḡad	écraser	568
enḡed	nḡed	nḡid	nḡed	neqqed/neḡḡe d	supprimer	569
enḡ ^w ej	nḡ ^w ej	nḡ ^w ij	nḡ ^w ej	neqq ^w ej	enlever	569
enḡel	nḡel	nḡil	nḡel	neqqel/ṭṭenḡal	verser	569

enyer / enqer	nyer	nyir	enyer / enqer	neqquer/ṭṭenyar	perforer	570
enyes / enqes	nyes	nyis	enyes / enqes	neqqes/ṭṭenya s	diminuer	571
neqqi	neqqa	neqqi	neqqi	ṭneqqi	nettoyer	571
enqeb	nqeb	nqib	nqeb	neqqeb/ṭṭenqab	becqueter	572
enqec	nqec	nqic	nqec	neqqec	piocher	572
enqed	nqed	nqid	nqed	neqqed	écraser	572
enq ^w ej	nq ^w ej	nq ^w ij	nq ^w ej	neqq ^w ej/ṭṭenq ^w aj	moquer	572
enqer	nqer	nqir	nqer	neqquer	trouer	573
nager	nuger	nager	nager	ṭnaqar	heurter	573
enqes	nqes	nqis	nqes	neqqes	diminuer	574
enqee enqae	enqee enqae	nqie nqae	enqee enqae	neqqee/ṭṭenqae	déchoir	547
enseb	nseb	nsib	nseb	nesseb	rapporter	576
enser	nser	nsir	nser	neşser	moucher	577
ensex	nsex	nsix	nsex	neşsex	inscrire	578
enşeb	nşeb	nşib	nşeb	neşşeb	préparer	578
enşef	nşef	nşif	nşef	neşşef/nesşef/ ṭṭenşaf	remplacer	578
enşeh	nşeh	nşih	nşeh	nesşeh/nesşeh	nettoyer	579
enşel	nşel	nşil	nşel	neşşel/ṭṭenşal	détacher	579
enşer	nşer	nşir	nşer	ṭṭenşar	aider	579
entab	ntab	ntab	ntab	ṭṭentab	rosser	580
enteg	nteg	ntig	nteg	netteg	ébranler	582
entel	ntel	ntil	ntel	nettel/ṭṭental	être dissimulé	582
entam	ntam	ntam	ntam	ṭṭentam	commencer	581
enṭed	nṭed	nṭid	nṭed	netṭed/ṭṭenṭad	coller	581
enṭeg	nṭeg	nṭig	nṭeg	netṭeg/ṭṭenṭag	sauter	582
enṭeh	nṭeh	nṭih	nṭeh	netṭeh/ṭṭenṭah	flamber	582
inṭih	unṭah	nṭih	inṭih	ṭṭinṭih/ṭṭunṭah	crier	582
enṭel	nṭel	nṭil	nṭel	netṭel/ṭṭenṭal	enterrer	582
enṭeq	nṭeq	nṭiq	nṭeq	netṭeq	parler	583
enṭer	nṭer	nṭir	nṭer	netṭer	être très mal	583
enṭez	nṭez	nṭiz	nṭez	netṭez	eclater	584
enṭae	nṭae	nṭae	nṭae	ṭṭenṭae	être perdu	584
niwel	nawel	niwel	niwel	ṭṭnawal	préparer	585
enxel	nxel	nxil	nxel	nexxel/ṭṭenxal	vider	586
enxem	nxem	nxim	nxem	nexxem	cracher	587
enxer	xren	nxir	nxer	nexxer	être creux	587
enzef	nzef	nzif	nzef	nezzef/ṭṭenzaf	être épuisé	591
enzel	nzel	nzil	nzel	nezzel	filer	592
enzer	nzer	nzir	nzer	nezzer	moucher	592
enzer	nzer	nzir	nzer	ṭṭenzar	sécher	593
nazee	nuzee	nazee	nazee	ṭnazae	geindre	593
næel	næel	næil	næel	neæeel	maudire	594

enɛem	nɛem	nɛim	nɛem	neɛɛem	accéder	595
nɛeɾ	nɛeɾ	nɛiɾ	nɛeɾ	neɛɛeɾ	prier	595
nɛet	nɛet	nɛit	nɛet	neɛɛet	avoir odeur	595
enzef	nzef	nzif	nzef	nezzef/ɬenzaf	épuiser	595
ɣebbi	ɣebba	ɣebbi	ɣebbi	ɬɣebbi	cache	599
eɣ ^w bel	ɣ ^w bel	ɣ ^w bil	ɣ ^w bel	ɣ ^w ebbel	être chagrin	600
eɣ ^w ben	ɣ ^w ben	ɣ ^w bin	ɣ ^w ben	ɣ ^w ebben	triste	600
eɣber	ɣber	ɣbir	ɣber	ɣebber	poussière	600
ɣucc	ɣucc	ɣucc	ɣucc	ɬɣuccu	dénoncer	601
eɣder	ɣder	ɣdir	ɣder	ɣedder	tromper	603
eɣdeb	ɣdeb	ɣdib	ɣdeb	ɣetteb	dissimuler	604
eɣdel	ɣdel	ɣdil	ɣdel	ɣettel	tomber	604
eɣdeş	ɣdeş	ɣdeş	ɣdeş	ɣeddeş	enrober	604
eɣfel	ɣfel	ɣfil	ɣfel	ɣeffel	être distrait	605
eɣ ^w fer	ɣ ^w fer	ɣ ^w fir	ɣ ^w fer	ɣ ^w effeɾ	pardonne	605
ɣafer	ɣufer	ɣafer	ɣafer	ɬɣafar	baiser	605
ɣull	ɣull	ɣull	ɣull	ɬɣullu/ɬɣull	vouloir du mal	606
qq ^w el	qq ^w el	qq ^w il	qq ^w el	teqq ^w el/ɬtuɣal	devenir	608
eyleb	ɣleb	ɣlib	ɣleb	ɣelleb/ɬteɣlab	vaincre	609
eyleđ	ɣleđ	ɣliđ	ɣleđ	ɣelled/ɬteɣlađ	tromper	610
eɣ ^w lef	ɣ ^w lef	ɣ ^w lif	ɣ ^w lef	ɣ ^w ellef/ɬteɣ ^w laf	être enfermé	610
eyleq	ɣleq	ɣliq	ɣleq	ɣelleq	fermer	611
ɣumm	ɣumm	ɣumm	ɣumm	ɬɣummu/ɬɣumm	couvrir	613
qqim	qqim	qqim	qqim	ɬɣimi/ɬɣim/ɬɣama	rester	614
eɣmed	ɣmed	ɣmiđ	ɣmed	ɣemmed	cache	616
eɣmel	ɣmel	ɣmil	ɣmel	ɣemmel/ɬteɣmal	être moisi	616
eɣmeq	ɣmeq	ɣmiq	ɣmeq	ɣemmeq/ɬteɣmaq	être profond	616
eɣmes	ɣmes	ɣmis	ɣmes	ɣemmes	disparaître	617
eɣmez	ɣmez	ɣmiz	ɣmez	ɣemmez/ɬteɣmaz	cligner de l'œil	617
ɣenni	ɣenna	ɣenni	ɣenni	ɬɣenni	chanter	618
ɣunfu	ɣunfa	ɣunfu	ɣunfu	ɬɣunfu	repousser par de goût	618
ɣunzu	ɣunza	ɣunzu	ɣunzu	ɬɣunzu	bouder	620
eɣret	ɣret	ɣrit	ɣret	ɣerret	appeler	620
ɣurɾ	ɣurɾ	ɣurɾ	ɣurɾ	ɬɣurɾu	illusionner	621
qqar	qqur	qqar	qqar	ɬɣar	être sec	621
ɣerri	ɣerra	ɣerri	ɣerri	ɬɣerri	être apprêté	623
eɣrec	ɣrec	ɣric	ɣrec	ɣerrec	être chétif	624
eɣrem	ɣrem	ɣrim	ɣrem	ɣerrem/ɬteɣram	dédommager	626
eɣreq	ɣreq	ɣriq	ɣreq	ɣerreq/ɬteɣraq	sombrer	627
eɣres	ɣres	ɣris	ɣres	ɣerres	être planté	627

eyrez	yrez	yřiz	yřez	yerrez	tendre un piège	629
eysel	yssel	yřil	yřel	yessel/yeřsel	laver	629
eyřeb	yřeb	yřib	yřeb	yeyřeb	être pressé	630
yutt	yutt	yutt	yutt	tyuttu	emmitoufler	630
y ^w ett	y ^w etta	y ^w ett	y ^w ett	ty ^w etti	couvrir	630
eydes	ydes	ydiř	ydes	yeytes	être plongé	631
eywed	yewd	ywid	ywed	yewwed	tailler	631
yiwel	yawel	yiwel	yiwel	tyawal	dépêcher	632
iywis	uywas	iywis	iywis	tyiywis	créer	632
eyyer	yyer	yyr	yyer	yeyyer	séduire	634
yezz	yezz	yezz	yezz	yezz	grignoter	634
iy ^w zif	y ^w ezzif	y ^w zif	y ^w zif	ty ^w zif	être long	635
eyzel/ ey ^w zel	eyzel/ ey ^w zel	yzil	eyzel/ ey ^w zel	yeyzel/yeyzel/ tyeyzal	serrer	636
eqbec	qbec	qbic	qbec	qebbec	fabriquer	638
eqbed / eq ^w bed	qbed	qbid	eqbed / eq ^w bed	qebbed	encaisser	638
eqbeh	qbeh	qbih	qbeh	qebbeh	être insolent	639
eqbel	qbel	qbil	qbel	qebbel	accepter	639
eqber/eq ^w ber	qber	qbir	eqber/e q ^w ber	qebber	etouffent	642
qqac	qac	qac	qqac	tyqqac/tyqac	frapper	644
qucc	qucc	qucc	qucc	tyquccu/tyqucc	rafler	644
eqcer/eq ^w cer	q ^w cer	qcir	eqcer/e q ^w cer	tyeqcar	être épluché	646
eqce	qce	qcie	qce	qecce	expulser	647
qqed	qged	qqid	qqed	teqqed	cautériser	647
qadd	qadd	qadd	qadd	tyqadda/tyqadd	être suffisant	648
eqdec	qdec	qdic	qdec	qeddec	servir	648
eqdef	qdef	qdif	qdef	qeddef	accélérer	648
eqdeh	qdeh	qdih	qdeh	qeddeh	dévorer	648
eqdem	qdem	qdim	qdem	qeddem/tyeqdam	être vieux	649
qadem	qudem	qadem	qadem	tyqadam	aborder	649
qader	quder	qader	qader	tyqadar	respecter	650
eqdew	qdew	qdiw	qdew	qeddew	anxiété	651
eqdeb	qdeb	qdib	qdeb	qeydeb	découper	652
eqdee	qdee	qdie	qdee	qeytee	interrompre	653
eqtee	qtee	qtie	qtee	qeytee	couper	653
qadee	qudee	qadee	qadee	tyqadae	rejoindre	653
eqfel	qfel	qfil	qfel	qeyfel/tyeqfal	fermer	654
eqfer	qfer	qfir	qfer	qeyfer/tyeqfar	être anéanti	655
eqfufi	qfufi	qfufi	qfufi	tyeqfufuy/tyeqfufi	trembler	655
eqfez	qfez	qfiz	qfez	qeyfez	hâter	655
eqher	qher	qhır	qher	qeyher	accabler	656
eq ^w jej	q ^w jej	q ^w jij	q ^w jej	q ^w ejej	être fané	656
iqlil	qilil	qilil	iqlil	tyiqlil	être rare	660

eqleb	qleb	qlib	qleb	qelleb/ṭteqlab	retourner	661
eq ^w lec	q ^w lec	q ^w lic	q ^w lec	q ^w ellec	gratter	662
eq ^w lem	q ^w lem	q ^w lim	q ^w lem	q ^w ellem	tige	663
eqleq	qleq	qliq	qleq	qelleq	être préoccupé	663
eqleε	qleε	qliε	qleε	qelleε/ṭteqlae	arracher	664
qqim	qqim	qqim	qqim	qqim	rester	665
eqmec	qmec	qmic	qmec	qemmec	fermer	665
eqmeḍ	qmeḍ	qmiḍ	qmeḍ	qemmed/ ṭteqmaḍ	être étroit	666
eqmeḥ	qmeḥ	qmiḥ	qmeḥ	qemmeḥ	être mal élève	666
eqmeṛ	qmeṛ	qmiṛ	qmeṛ	qemmer	être susceptible	666
eqqen	qqen	qqin	qqen	teqqen	attacher	667
eqnee	qnee	qniε	qnee	ṭteqnaε	contenter	670
qirṛ	qarr	qirṛ	qirṛ	ṭqirri	avouer	671
eqreb	qreb	qrib	qreb	qerreb/ṭteqrab	être proche	673
eq ^w rec	q ^w rec	q ^w ric	q ^w rec	q ^w errec	grincer	674
eqreḍ	qreḍ	qriḍ	qreḍ	qerred	couper	676
eqreḥ	qreḥ	qriḥ	qreḥ	qerreh	souffrir	677
iqriḥ	qerriḥ	qriḥ	qriḥ	ṭtiqriḥ	être pimenté	677
eq ^w rem	q ^w rem	q ^w rim	q ^w rem	q ^w errem/ ṭteq ^w ram	casser	677
eqren	qren	qrin	qren	qerren/ṭteqran	assimiler	678
eq ^w res	q ^w res	q ^w ris	q ^w res	q ^w erres	façonner	679
eqreṣ	qreṣ	qris	qreṣ	ṭteyras/ṭteqras	être déchiré	680
qareε	qureε	qareε	qareε	ṭqaraε	attendre	681
eqqes	qqes	qqis	qqes	teqqes	piquer	681
qass	qass	quss	qass	ṭqassa	tenir	682
qiss	qiss	qass	qiss	ṭqissi/ṭqiss	mesurer	682
eqsed	qsed	qsid	qsed	qessed	être décidé	683
eqsef	qsef	qsif	qsef	qessef/qeṣṣef /ṭeqsaf	se casser	683
eqseḥ	qseḥ	qsiḥ	qseḥ	qesseḥ/ṭteqsah	être dur	683
eqsem	qsem	qsim	qsem	qessem/ṭteqsa m	être destiné	684
eq ^w sem	q ^w esm	q ^w sem	q ^w sem	q ^w essem	être coupé	684
eqtel	qtel	qtil	qtel	qettel	assommer	685
qetṭi	qetṭa	qetṭi	qetṭi	ṭqetṭi	régler des comptes	685
qewwi	qewwa	qewwi	qewwi	ṭqewwi	grossir	686
qebb ^w i	qebb ^w a	qebb ^w i	qebb ^w i	ṭqebb ^w i	être gras	686
eqwed	qwed	qwid	qwed	ṭtaqwad/qeww ed	être droit	686
eqyes	qyes	qyis	qyes	ṭteqyas	être petite	689
qazem	quzem	qazem	qazem	ṭqazam	aborder	690
eqæed	qæed	qæid	qæed	qeææed/ṭteqæa d	être stable	691
iqæid	qæid	qæid	qæid	ṭtiqæid	être stable	691

ṛebbi	ṛebba	ṛebbi	ṛebbi	ṭrebbi	educer	699
erbeḡ	rbeḡ	rbiḡ	rbeḡ	rebbeḡ/ṭterbaḡ	attacher	700
erbeḥ	rbeḥ	rbiḥ	rbeḥ	rebbeḥ/ṭterbaḥ	gagner	701
rabeε/ra weε	ṛubeε ṛuweε	rabeε/raweε	rabeε/r aweε	ṭrabae/ṭrawae	trotter	703
ṛucc	ṛucc	ṛucc	ṛucc	ṭruccu/ṭrucc	arroser	704
eṛced	ṛced	ṛcid	ṛced	ṛeced	conseiller	705
eṛceḥ	ṛceḥ	ṛciḥ	ṛceḥ	ṛecceḥ/ṛeçceḥ/ ṭṭerçaḥ	suinter	705
ercel	rcel	rcil	rcel	reccel	fêter	705
eṛcem	ṛcem	ṛcim	ṛcem	ṛeçcem/ṭṭerca m	faire des points de feu	705
eṛcex	ṛcex	ṛçix	ṛcex	ṛeçcex	enfoncer	705
eṛdeḥ	ṛdeḥ	ṛdiḥ	ṛdeḥ	ṛeddeḥ	danser	707
erdem	rdem	rdim	rdem	reddem/ṭṭerda m	effondrer	707
eṛdem	ṛdem	ṛdim	ṛdem	reddem/ṭṭerda m	être noyé	707
eṛdex	ṛdex	ṛdix	ṛdex	ṛeddex	écrouler	708
eṛdeb	ṛdeb	ṛdib	ṛdeb	ṛetteb/ṭṭerḍab	être humide	709
eṛḍel	ṛḍel	ṛḍil	ṛḍel	ṛetteḥ/ṭṭerḍal	prêter	709
erfed	rfed	rfid	rfed	reffed	soulever	711
erfen	rfen	rfin	rfen	reffen	travailler	711
eṛfeq	ṛfeq	ṛfiq	ṛfeq	ṛeffeq/ṭṭerfaq	calmer	711
ṛafeq	rufeq	ṛafeq	ṛafeq	ṭṭrafaq	accompagner	711
erfes	rfes	rfis	rfes	reffes	être désordre	712
eṛfeε	ṛfeε	ṛfiε	ṛfeε	ṛeffeε/ṭṭerfaε	enlever	712
eṛḡel	ṛḡel	ṛḡil	ṛḡel	reggel/ṭṭerḡal	boucher	713
eṛḡem	ṛḡem	ṛḡim	ṛḡem	reggem	injurier	714
eṛḡen	ṛḡen	ṛḡin	ṛḡen	reggen/ṭṭerḡan	être en caillots	714
eṛheb	ṛheb	ṛhib	ṛheb	ṛehheb	être timide	715
eṛheḍ	ṛheḍ	ṛhiḍ	ṛheḍ	ṛehheḍ/ṭṭerḥaḍ	bouturer	715
eṛhef	ṛhef	ṛhif	ṛhef	ṛehhef	être faible	715
eṛheḥ	ṛheḥ	ṛhiḥ	ṛheḥ	ṛehheḥ	être intoxiqué	716
erhem	rhem	rhim	rhem	rehhem	être maladif	716
eṛhen	ṛhen	ṛhin	ṛhen	ṛehhen	hypothéquer	716
eṛheb	ṛheb	ṛhib	ṛheb	ṛehheb	être accueilli	717
eṛhel	ṛhel	ṛhil	ṛhel	ṛehhel/ṭṭerḥal	partir	717
eṛhem	ṛhem	ṛhim	ṛhem	ṛehhem	faire miséricorde	718
eṛjeh	ṛjeh	ṛjih	ṛjeh	ṛejjeh	être dépourvu	719
eṛjem	ṛjem	ṛjim	ṛjem	ṛejjem	lapider	719
eṛjen	ṛjen	ṛjin	ṛjen	ṛejjen	mélanger	719
eṛjeq	ṛjeq	ṛjiq	ṛjeq	ṛejjeq	plier	719
eṛjeε	ṛjeε	ṛjiε	ṛjeε	ṛejjeε	revenir	719
eṛkeb	rkeb	rkib	rkeb	rekkeb	monter	720
eṛkec / erke ^w ec	eṛkec / erke ^w ec	rkic	eṛkec / erke ^w ec	rekkec	brasser	721
eṛked	rked	rkid	rked	rekked/ṭṭerkad	être calme	721

erkeđ	rkeđ	rkiđ	rkeđ	rekkeđ	fouler	721
erkeh	rkeh	rkih	rkeh	rekkeh	être stable	721
erkem	rkem	rkim	rkem	rekem/terkam	bouillir	722
erken	rken	rkin	rken	rekken	arrêter	722
erk ^w es	rk ^w es	rk ^w is	rk ^w es	rek ^w es	être encrassé	723
erkes	rkes	rkis	rkes	rekkes	être en boulettes	723
erkez	rkez	rkiz	rkez	rekkez/terkaz	attacher	724
erkeε	rkeε	rkie	rkeε	rekkeε/terkaε	s'enfoncer	724
ermec	rmec	rmic	rmec	remmec	ciller	726
ermed	rmed	rmid	rmed	remmed	cacher	726
ermeg	rmeg	rmig	rmeg	remmeg	tonner	726
ermej	rmej	rmij	rmej	remmej	froisser	726
ermel	rmel	rmil	rmel	remmel/termal	recourir	726
ermeq	rmeq	rmiq	rmeq	remmeq	remarquer	727
ermez	rmez	rmiz	rmez	remmez/termaz	grogner	727
ermez	rmez	rmiz	rmez	remmez	cligner de l'œil	728
eryeb	ryeb	ryib	ryeb	reyyeb/reqqeb	convoiter	730
ery ^w el	ry ^w el	ry ^w il	ry ^w el	reqq ^w el/tery ^w al	moisir	731
irriq	urqaq	irriq	irriq	terriq	briller	731
erqem	rqem	rqim	rqem	reqqem	agrémenter	732
erqes	rqes	rqis	rqes	reqqes	danser	732
erşed	rşed	rşid	rşed	reşşed/terşad	suppurer	735
ersel	rsel	rsil	rsel	tersal	être garni	733
erşel/ erşel	erşel/ erşel	rşil	erşel/ erşel	reşşel	irrésistiblement	735
erşem	rşem	rşim	rşem	reşşem/terşam	fixer	735
ertek	rtek	rtik	rtek	rettek	tomber	736
ertem	rtem	rtim	rtem	rettem/tertam	ebouler	736
erwel	rwel	rwil	rwel	regg ^w el	fuir	740
erxef	rxef	rxif	rxef	rexxef/terxaf	se relâcher	742
erx ^w em	rx ^w em	rx ^w im	rx ^w em	rex ^w em/ terx ^w am	recourir	742
erxes	rxes	rxis	rxes	terxis	bon prix	742
irxis	urxas	irxis	irxis	terxis	bon marché	742
erth	rtađ	rth	rth	terth	se reposer	744
errez	rrez	rriř	rrez	truzu/truzuy/truz/terza	être cassé	744
erzef	rzef	rzif	rzef	rezzef/terzaf	prendre un congé	746
irzig	irzig	irzig	irzig	terzig/terzag	être amer	747
erzen	rzen	rzin	rzen	rezzen/rezzen	être modéré	747
erzeq	rzeq	rziq	rzeq	rezzeq	gratifier	747

er̄eεc	r̄eεc	r̄eic	r̄eεc	r̄eεεc	trembler de peur	748
er̄eed	r̄eed	r̄eid	r̄eed	r̄eεeed/ṭṭer̄ead	tonner	748
sibb	sabb	sibb	sibb	ttsibbi	injurier	754
esbeḍ	sbeḍ	sbiḍ	sbeḍ	sebbeḍ	être collé	754
esbek	sbek	sbik	sbek	sebbek	être figé	754
esbey	sbey	sbiy	sbey	sebbey	peindre	755
esbeq	sbeq	sbiq	sbeq	sebbeq	précéder	755
essed	ssed	ssid	essed	tessed	tasser	756
esdeq	sdeq	sdiq	sdeq	ssdaq	être loyal	757
sed̄hi	sed̄hi	sed̄hi	sed̄hi	ttset̄hi	avoir honte	
esfef	ssfef	ssif	ssfef	tesfef	être éclaté	758
susef	susef	susuf	susef	ssusuf	cracher	759
esfed̄	sfed̄	sfid̄	sfed̄	seffed̄	essuyer	760
esfeh	sfeh	sfih	sfeh	ttesfah	être impertinent	760
esg ^w ed̄	sg ^w aḍ	sg ^w iḍ	sg ^w ed̄	ssg ^w aḍ	avaler	762
eshel	shel	shil	shel	seh̄hel/ṭṭeshal	être facile	764
sahel	suhel	sahel	sahel	ttsahal	partir en voyage	764
esh̄en	sh̄en	sh̄in	sh̄en	seh̄h̄en	griller	765
esh̄eq	sh̄eq	sh̄iq	sh̄eq	seh̄h̄eq/ṭṭesh̄a q	écraser	765
s̄ked	s̄kad	s̄kid	s̄ked	ss̄kad	regarder	766
es̄kef	s̄kef	s̄kif	s̄kef	sekkef	boire	767
es̄keṛ	s̄keṛ	s̄kiṛ	s̄keṛ	sekkeṛ	être ivre	768
es̄keṛ	s̄keṛ	s̄kiṛ	s̄keṛ	sekkeṛ/ṭṭes̄kar	faire	768
es̄k ^w er	šk ^w er	šk ^w er	šk ^w er	ṭṭšk ^w er	fermer	769
esleb	sleb	slib	sleb	selleb	être insensé	772
eslek	slek	slik	slek	sellek	supporter	773
salek	sulek	salek	salek	ttsalak	aider	773
eslem	selm	slim	slem	sellem/ṭṭeslam	être sain	773
salem	sulem	salem	salem	ṭsalam	être infecté	774
esley	sley	sliy	sley	selley	crépir	775
eslex	slex	slix	slex	sellex	dépouiller	775
summ	summ	summ	summ	ttsummu	sucer	777
semmi	semma	semmi	semmi	ttsemmi	nommer	777
esmed	smed	smid	smed	ttsemmid	compléter	778
esmeε	smeε	smiε	smeε	semmeε	écouter	781
issin	ssen	ssin	issin	ṭṭissin	connaitre	782
esyel	syel	syil	syel	ssyal	faire signe	785
seqqi	seqqa	seqqi	seqqi	ttseqqi	arroser	786
sqeḍ	sqeḍ	sqiḍ	sqeḍ	seqqaḍ	être gourmand	786
esser̄	sseṛ	ssiṛ	sseṛ	ttesseṛ	protéger	787
isrir	usrar	isrir	isrir	ṭṭisrir	dégager	790
serbi	serbi	serbi	serbi	sserbay	serrer	791
esred	sred	srid	sred	serred	être étendu	791
esref	sref	srif	sref	serref	nouer	791

esrem	srem	srin	srem	serrem	liquéfier	792
eswed	swed	swid	swed	sewwed	être noir	796
esxeb	sxeb	sxib	sxeb	sexxeb	fabriquer	798
esxec	sxec	sxic	sxec	sexxec	étonner	798
esxeđ	sxeđ	sxiđ	sxeđ	sexxeđ/ssxađ	punir	799
esxeř	sxeř	sxiř	sxeř	řtesxař	favorablement	799
seyyi	seyya	seyyi	seyyi	ttseyyi	décider	800
sayes	sayes/suyes	sayes	sayes	ttsayas	calmer	801
eseed	seed	sëid	seed	seëeed	rendre heureux	802
saeef	saeef	sueef	saeef	ttsaeef	accompagner	803
şubb	şubb	şubb	şubb	ttşubbu	déceindre	804
esbeđ	sbeđ	sbiđ	sbeđ	sebbeđ	être inerte	804
eşbeĥ	şbeĥ	şbiĥ	şbeĥ	şebbeĥ	convenir	804
eşseđ	şseđ	şsiđ	şseđ	tesseđ	être enragé	808
eşđef	şđef	şđif	şđef	şettef/řtesđaf	être noir	808
şedĥi	şedĥi	şedĥi	şedĥi	řtesedĥi	avoir honte	808
şeffi	şeffa	şeffi	şeffi	ttşeffi	nettoyer	809
eşfeĥ	şfeĥ	şfiĥ	şfeĥ	şeffeĥ	être dur	810
eşfen	şfen	şfin	şfen	şeffen	être dégouté	810
şafeř	şufeř	şafeř	şafeř	ttşafar	voyager	810
şehĥi	şehĥa	şehĥa	şehĥi	ttşehĥi	être fort	811
şaĥeb	şuĥeb	şaĥeb	şaĥeb	ttşaĥab	enquêter	811
eşleb	şleb	şlib	şleb	şelleb	être véreux	812
eşleĥ	şleĥ	şlih	şleĥ	şelleĥ/řteslaş	être utile	812
eşneb	şneb	şnib	şneb	şenneb	être véreux	813
eşnee	şnee	şnie	şnee	şennee	fabriquer	814
eşřeε	şřeε	şrie	şřeε	şerree	etourdir	816
eşweb	şweb	şwib	şweb	şwweb	être juste	816
eşyed	şyed	şyiđ	şyed	şeyyed/řtesyađ	être gâté	817
eşeeb	şeeb	şëib	şeeb	şeëeeb	être difficile	817
etbet	tbet	tbit	tbet	tebbet/řtetbat	être assuré	820
etbeε	tbeε	tbie	tbeε	ttabae/tebbeε	suivre	821
ethef	řhef	řhif	řhef	teĥhef/řtethaf	être beau	822
eřtel	řtel	řtil	řtel	teřtel	enrouler	823
etlef	řlef	řlif	řlef	tellef/ttellif	chasser	824
etmeř	řmeř	řmiř	řmeř	temmeř	être gorgé	826
etqel	řqel	řqil	řqel	teqqel/řtetqal	être lourd	827
êtrek	řrek	řrik	řrek	terrek	laisser	828
etřek	řřek	řřik	řřek	teřřek	battre	828
etwel	řwel	řwil	řwel	tewwel/řtetwal	être habitué	830
etwer	řwer	řwir	řwer	tewwer	être coincé	830
edbee	řbee	řbie	řbee	řebbee/ttabae	cacheter	835
eřteđ	řteđ	řtiđ	řteđ	teřteđ	téter	835
eřtef	řtef	řtif	řtef	řtařaf	prendre	835
řtaĥ	řtaĥ	řtaĥ	řtaĥ	řteřtaĥ	frapper	837

edleb	ḍleb	ḍlib	ḍleb	ḍelleb/ṭṭalab	demander	838
edleq	ḍleq	ḍliq	ḍleq	ḍelleq/ṭṭedlaq/ ṭṭelliq	lâcher	839
eṭlee	ṭlee	ṭlie	ṭlee	ṭellee	monter	839
eḍmee	ḍmee	ḍmie	ḍmee	ḍemmee/ṭṭeḍ mae/ṭamee	convoiter	840
edreh	ḍreh	ḍriḥ	ḍreh	ḍerreh/ṭṭeḍrah / terriḥ	etaler	843
ṭtes	ṭtes	ṭtis	ṭtes	ṭṭattas	dormir	844
ṭtee	ṭtee	ṭtie	ṭtee	ṭettee	poursuivre	846
ṭeen	ṭeen	ṭein	ṭeen	ṭeeen	nuire	847
ḍeen	ḍeen	ḍein	ḍeen	ḍeeen	faire mal	847
weddi	wedda	weddi	weddi	ṭweddi	baisser	850
ewdec	wdec	wdic	wdec	weddec/ṭṭewd ac	être courtaud	850
ewdee	wdee	wdie	wdee	weddee	être fils posthume	850
wadee	wudee	wadee	wadee	ṭwadee	céder	853
weffi	weffa	weffi	weffi	ṭweffi/ṭweffay	mourir	853
wafeq	wufeq	wafeq	wafeq	ṭwafaq	être c'accord	854
ewgef	wgef	wḡif	wgef	weggef/ṭṭewḡ af	s'arrêter	855
wehhi	wehha	wehhi	wehhi	ṭwehhi	indiquer	855
ewheb	wheb	whib	wheb	wehheb	diriger	855
ewhem	whem	whim	whem	wehhem/ṭṭew ham/ṭṭewhim	s'étonner	856
wehḥi	wehḥa	wehḥi	wehḥi	ṭwehḥi	monter	856
ewḥec	wḥec	wḥic	wḥec	wehḥec/ṭṭewḥ ac	craindre	856
awḥed	awḥed	wḥid	awḥed	wehḥed	être seul	857
ewḥel	wḥel	wḥil	wḥel	wehḥel	être embourbé	858
ewjeb	wjeb	wjib	wjeb	wejjeb	convenir	858
wajeb	wajeb	wujeb	wajeb	ṭwajab	répliquer	858
ewjed	wjed	wjid	wjed	wejjed	être prêt	858
wajeh	wujeh	wajeh	wajeh	ṭwajah	faire face	859
ewjee	wjee	wjie	wjee	wejjee	attacher	859
wekki	wekka	wekki	wekki	ṭwekki	appuyer	860
welli	wella	welli	welli	ṭwelli	revenir	862
walef	wulef	walef	walef	ṭwalaf	être habitué	864
walem	wulem	walem	walem	ṭwalam	convenable	865
ewles	wles	wlis	wles	welles	avoir des douleurs	865
wanes	wunes	wanes	wanes	ṭwanas	accompagner	867
ewqem	wqem	wqim	wqem	ṭṭewqam/ṭṭew qim/ṭṭuqam	faire	870
ewqet	wqet	wqit	wqet	weqqet/ṭṭewqat	organiser	870
ewqee	wqee	wqie	wqee	weqqee/ṭṭewq	tomber	870

				aε/ṭṭwaqaε		
werri	werra	werri	werri	ṭwerri	montrer	872
iwr̄iy	werr̄ay	wr̄iy	iwr̄iy	ṭṭiwr̄iy	être jaune	874
ewr̄et	wr̄et	wr̄it	wr̄et	werr̄et	hériter	875
ewsem	wsem	wsim	wsem	ṭṭewsam	être lié	875
ewseq	wseq	wsiq	wseq	wesseq/ṭṭewsa q	expédier	875
ewsex	wsex	wsix	wsex	wessex	être sale	876
ewsee	wsee	wsie	wsee	wessee/ṭṭewsa ε	être vaste	876
iwsie	iwsie	iwsie	iwsie	ṭṭiwsie/ṭṭewsa ε	être vaste	876
wessi	wessa	wessi	wessi	ṭwessi	conseiller	877
ewsef	wsef	wsif	wsef	wessef/wessef / ṭṭewsaf	avoir forme	877
ewsel	wsel	wsil	wsel	wessel	allonger	878
wet̄ti	wet̄ta	wet̄ti	wet̄ti	ṭwet̄ti	niveler	880
ewxed	wxed	wxid	wxed	wexxed	être en dommage	880
ewxem	wxem	wxim	wxem	wexxem/ ṭṭewxam	être infecté	880
ewzen	wzen	wzin	wzen	wezzen	mesurer	884
ewzee	wzee	wzie	wzee	wezzee/ṭṭewza ε	éparpiller	884
eweed	weed	weid	weed	ṭṭewead	être destiné	885
eweer̄	weer̄	weer̄	weer̄	weeer̄	être difficile	885
iweer̄	weer̄	iweer̄	iweer̄	ṭṭiweer̄	être difficile	886
exbec	xbec	xbic	xbec	xebbec/ṭṭexba c	égratigner	887
exbed	xbed	xbid	xbed	xebbed	gratter	888
exbet	xbet	xbit	xbet	xebbet	se tapir	888
xxuc	xxuc	xxuc	xxuc	ṭxucu/ṭxuc	dormir	889
excen	xcen	xcin	xcen	xeccen	être fort	889
eṭxed	ṭxed	ṭxid	ṭxed	texxed/ṭṭetxad	être pris	890
exdem	xdem	xdim	xdem	xeddem/ṭṭexd am	travailler	890
exdee	xdee	xdie	xdee	xeddee	trahir	892
exdeb	xdeb	xḍib	xdeb	xetṭeb/ṭṭexḍab	choisir une fiancée	893
exḍef	xḍef	xḍif	xḍef	xetṭef/ṭṭexḍaf	enlever	893
xeffi	xeffa	xeffi	xeffi	ṭxeffi	disparaître	893
ixfif	xfif	xfif	ixfif	ṭṭixfif	s'activer	894
xelli	xella	xelli	xelli	ṭxelli	laisser	896
exleḍ	xleḍ	xliḍ	xleḍ	xelled/ṭṭexlaḍ	être mélangé	896
exlef	xlef	xlif	xlef	xellef/ṭṭexlaf	repousser	897
exleq	xleq	xliq	xleq	xelleq/ṭṭexlaq	créer	899
exleṣ	xleṣ	xliṣ	xleṣ	ṭṭexlaṣ	faire payer	899
ex ^w leε	x ^w leε	x ^w lie	x ^w leε	x ^w elleε	être épouvanté	900

ex ^w meĵ	x ^w meĵ	x ^w miĵ	x ^w meĵ	x ^w emmeĵ	mal propre	901
ex ^w meṛ	x ^w meṛ	x ^w mir	x ^w meṛ	x ^w emmer	être mal propre	901
exneq	xneq	xniq	xneq	xenneq/ṭṭexnaq	étrangler	903
exnez	xnez	xniz	xnez	xennez	être maussade	904
exṛeb	xṛeb	xṛib	xṛeb	xe ṛreb	embrouiller	905
ex ^w reḍ	x ^w reḍ	x ^w riḍ	x ^w reḍ	x ^w erṛeḍ	creuser	906
ex ^w reḥ	x ^w reḥ	x ^w riḥ	x ^w reḥ	x ^w erṛeḥ	être rassasié	906
exṛem	xṛem	xṛim	xṛem	xeṛrem	griffer	907
exreq	xreq	xriq	xreq	xerreq	lacéré	907
exṛez	xṛez	xṛiz	xṛez	xerrez	coudre	908
exseḥ	xseḥ	xsif	xseḥ	xesṣeḥ	démaille	908
exseṛ	xseṛ	xsiṛ	xseṛ	xesṣeṛ/ṭṭexsaṛ	gâter	908
exṣem	xṣem	xṣim	xṣem	xesṣem/ṭṭexsaṣm	raisonner	909
xasṣ	xuṣṣ	xasṣ	xasṣ	ṭxasṣa/ṭxasṣ	manquer	909
extem	xtem	xtim	xtem	xettem/ṭṭextam	finir	910
exten	xten	xtin	xten	xetten	être circoncrire	910
extiṛ	xtaṛ	xtiṛ	xtiṛ	ṭṭextiṛi/ṭṭextaṛay	choisir	911
xetṭi	xetṭa	xetṭi	xetṭi	ṭxetṭi	imposer une amende	911
xayel	xuyel	xayel	xayel	ṭxayal	être craintif	914
exzem	xzem	xzim	xzem	xezzem	percer	916
exzen	xezn	xzin	xzen	xezzen/ṭṭexzan	conserver	916
exzeṛ	xezeṛ	xziṛ	xzeṛ	xezzeṛ/ṭṭxazaṛ / ṭxezzeṛ	regarder	916
zziz	zzaz	zziz	zziz	zzazay/zziziy	déplacer	925
eḻbeṛ / ezbeṛ	eḻbeṛ / ezbeṛ	ḻbiṛ	eḻbeṛ / ezbeṛ	ḻebbeṛ	débroussailler	928
izdig	uzdag	izdig	izdig	ṭṭizdig	être propre	929
eḻdeḥ	ḻdeḥ	ḻdiḥ	ḻdeḥ	ḻeddeḥ	consommer	929
ezdel	zdel	zdil	zdel	zeddel	couver	929
ezdem	zdem	zdim	zdem	zeddem	ramasser	929
eḻdem	ḻdem	ḻdim	ḻdem	ḻeddem	attaquer	930
ezdey	zdey	zdiy	zdey	zeddey	habiter	930
eḻdeḥ	ḻdeḥ	ḻdiḥ	ḻdeḥ	ḻeḍḍeḥ	être serré	932
eḻzeḥ	ḻzeḥ	ḻziḥ	ḻzeḥ	ṭṭizzif/teḻzeḥ	filer	932
zuff	zuff	zuff	zuff	zzuffu	souffler	932
eḻzeḥ	ḻzeḥ	ḻziḥ	ḻzeḥ	teḻzeḥ	déchausser	932
eḻzeg	ḻzeg	ḻzig	ḻzeg	teḻzeg	traire	933
ḻeggi	ḻegga	ḻeggi	ḻeggi	zzeggi	vociférer	934
eḻḡel	ḻḡel	ḻḡil	ḻḡel	zeggel	rater	935
eḻḡen	ḻḡen	ḻḡin	ḻḡen	zeggen/ṭṭezḡan	être à moitié	935

ezġer	zġer	zġir	zġer	zegger	traverser	935
ezhef	zhef	zhif	zhef	zehhef	passé rapidement	937
ezher	zher	zhir	zher	zehher	ronfler	937
ezheċ	zheċ	zhiċ	zheċ	zehheċ	véhémence	938
ezhel	zhel	zhil	zhel	zehhel	s'énervé	938
ezkem	zkem	zkim	zkem	zekkem	se taire	939
ezzel	zzel	zzil	zzel	tezzel	tendre	940
azzel	uzzel	zzil	azzel	ttazzal	courir	940
ezleċ	zleċ	zliċ	zleċ	zelleċ	être misérable	942
ezlef	zlef	zlif	zlef	zellef	flamber	942
ezleg	zleg	zlig	zleg	zelleg	déformer	943
ezlem	zlem	zlim	zlem	zellem	regarder de travers	943
ezleq	zleq	zliq	zleq	zelleq	glisser	944
ezleġ	zleġ	zliġ	zleġ	zelleġ/ttezzlaġ	être dépourvu	994
ezlez	zlez	zliz	zlez	zellez/ttezzlaz	secouer	944
ezzem	zzem	zzim	zzem	tezzem	faire des reprocher	944
ezzem	zzem	zzim	zzem	tezzem	décharner	945
ezmeċ	zmeċ	zmiċ	zmeċ	zemmeċ	serrer	946
ezmek	zmek	zmik	zmek	zemmek/ttezzmak	oppresser	946
ezmer	zmer	zmir	zmer	zemmer	être capable	947
zuzen	zuzen	zuzen	zuzen	zzuzun	bercer	949
ezyeb	zyeb	zyib	zyeb	zeyyeb/ttezzya b	être couvert	951
ezyel	zyel	zyil	zyel	zeyyel/zeqqel	s'emporter	951
ezqef	zqef	zqif	zqef	zeqqef	arrêter	952
ezqem	zqem	zqim	zqem	zeqqem/ttezzqam	réduire	952
ezzer	zzer	zzir	zzer	tezzzer	couler	952
ezreb	zreb	zrib	zreb	zerreb	se dépêcher	955
ezreq	zreq	zriq	zreq	zerreq	esquiver	958
ezreċ	zreċ	zrie	zreċ	zerreċ	semmer	959
ezwec	zwec	zwic	zwec	zewwec	être bruyant	960
ezweġ	zweġ	zwiġ	zweġ	zewweġ	être marié	960
ezwel	zwel	zwil	zwel	zewwel/zebb ^w el	brunir	960
ezwey	zwey	zwy	zwey	zewwey/zegg ^w ey	rougir	961
izwiy	zegg ^w ay/ zwey	izwiy	izwiy	ttizwiy	rougir	961
ezweġ	zweġ	zwiġ	zweġ	zewweġ/zegg ^w eġ	réussir	961
zwir	zwar	zwir	zwir	zegg ^w ir	précède	962
zuxx	zuxx	zuxx	zuxx	zzuxxu	vanter	963
ezyen	zyen	zyin	zyen	zeyyen/ttezzyan	être beau	965

izyin	zyen	izyin	izyin	ɥizyin	être beau	965
ezzeɛ	zzeɛ	zze	zzeɛ	tezzeɛ	chasser	966
ezɛɛd	zeɛd	zeɪd	zeɛd	zeɛɛd	vociférer	967
ezɛɛf	zeɛf	zeɪf	zeɛf	zeɛɛf	s'énervé	967
ezɛɛq	zeɛq	zeɪq	zeɛq	zeɛɛq	être aigu	967
ɛbbi	ɛbba	ɛbbi	ɛbbi	ɥɛbbi	charger	968
ɛɛbed	ɛbed	ɛbid	ɛbed	ɛbbɛd/ɥɛɛba d	adorer	969
ɛɛɛɛz	ɛɛɛz	ɛɛɛz	ɛɛɛz	ɛbbɛz	entasser	970
ɛɛɛɛq	ɛɛɛq	ɛɛɛq	ɛɛɛq	ɛɛɛɛq	tomber amoureux	971
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	fréquenter	972
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ/ɥɛɛɛɛ	compter	973
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ/ɥɛɛɛɛ	passer	973
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɥɛɛɛɛ m	détériorer	976
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	laisser	976
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	être chétif	976
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	plier	977
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɥɛɛɛɛ	retarder	977
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	être inséparable	977
ɛɛɛɛɛ/ ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɛɛɛɛɛ	éternuer	977
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	triturer	978
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	salir	978
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	avoir du piquant	979
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	fouler	979
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɥɛɛɛɛɛ	être paresseux	980
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	promettre	980
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	triturer	981
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɥɛɛɛɛɛ	plaire	981
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	hâter	981
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	pétrir	982
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	moquer	982
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	courber	982
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	contrarier	982
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	nourrir	983
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	se moquer	985
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɥɛɛɛɛɛ	savoir	985
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	s'élever	987
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	faire agir	989
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ/ɥɛɛɛɛ ɛ	garnir	990
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	adresser	992
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	émulation	992
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɥɛɛɛɛ	punir	994
ɛɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛ	ɛɛɛɛɛ	reconnaitre	995

eəqer	eqer	eqir	eqer	eəqer/ṭṭeəqar	être stérile	996
eəred	ered	erid	ered	eəred/ṭṭeərad	inviter	999
iərid	ierid	ierid	ierid	ṭṭierid	être large	1000
eəref	eref	erif	eref	eəref	connaître	1000
eəreġ	ereġ	erig	ereġ	eəreġ	s'inquiéter	1001
eerek	erek	erik	erek	eərek/ṭṭeərak	pétrir	1001
eəreq	ereq	eriq	ereq	eəreq	disparaître	1001
eəres	eres	eris	eres	eəres	être étayé	1002
əerri	erra	erri	erri	ṭəerri	dépouiller	1002
əass	euss	eass	eass	ṭəassa	surveiller	1003
eəsel	esl	esil	esl	eəşşel	être pétrir	1004
eəşer	eşer	eşir	eşer	eəşşer	comprimer	1004
eəteb	eteb	etib	eteb	eətteb/ṭṭeəṭṭib	se fatiguer	1005
eəteq	eteq	etiq	eteq	eətteq	conserver	1006
eəteṭ	eteṭ	etiṭ	eteṭ	eəṭṭeṭ/ṭṭeṭṭeṭ	trébucher	1006
eəḍel	eḍel	eḍil	eḍel	eəṭṭel	tarder	1006
eiwed	eawed	eawed	eiwed	ṭəawad	réitérer	1007
eəwej	ewej	ewij	ewej	eəgg ^w ej/ṭṭeəwaj	être tordu	1007
eiwen	eawen	eiwen	eiwen	ṭəawan	aider	1008
eiwez	eawez	eiwez	eiwez	ṭəawaz	veiller	1010
eəyed	eyed	eyid	eyed	eəyyed/ṭṭeəyad	être amer	1011
əayen	euyen	eayen	əayen	ṭəayan	essayer	1012
əayer	euyer	eayer	əayer	ṭəayar	dénigrer	1013
əuzz	euzz	euzz	əuzz	ṭəuzzu/ṭəuzz	honorer	1013
iəziz	eziz	eziz	eziz	ṭṭieziz	être cher	1013
eəzeg	ezeg	ezig	ezeg	eəzzeg/eəzzeg / ṭṭeəzag	être sourd	1014
eəzel	ezel	ezil	ezel	eəzzel/eəzzel	ecarter	1015
eəzem	ezem	ezim	ezem	eəzzem	se proposer	1015

Amyag aḥerfi bu kraḍ n tergalin deg temnaḍt n Tezmalt

amyag aḥerfi deg Dallet	amyag aḥerfi deg tezmalt	imizri	imizri ibaw	urmir	urmir ussid	anameks tefransist
			106			

bubb	/	/	/	/	/	
bibb	bibb	bubb	bubb	bibb	ttabba	
becc	<u>b</u> ecc	<u>b</u> ecc	<u>b</u> icc	<u>b</u> ecc	tt <u>b</u> eccic	
bedd	<u>b</u> edd	<u>b</u> edd	<u>b</u> did	<u>b</u> edd	tt <u>b</u> edad	
ebded	<u>b</u> ded	<u>b</u> edd	<u>b</u> did	<u>b</u> edd	tt <u>b</u> edad	
budd	<u>b</u> udd	<u>b</u> udd	<u>b</u> udd	<u>b</u> udd	tt <u>b</u> uddu	
ebder	bder	bder	bdir	bder	ttebdar	
ebdeε	/	/	/	/	/	
badeε	/	/	/	/	/	
bađen	/	/	/	/	/	
ebđer	/	/	/	/	/	
ebġes	bges	bges	bġis	bges	ttebgas	
ebhet	/	/	/	/	/	
bbah	/	/	/	/	/	
buħef	/	/	/	/	/	
ebħet	bħet	bħet	bħit	bħet	ttbeħhit	
ebjeh	bjeh	bjeh	bjih	bjeh	ttebjah	
ebley	/	/	/	/	/	
ebleε	bleε	bleε	blie	bleε	tteblae	
ibnin	ibnin	binn	bnin	ibnin	ttibnin	
bbey	bbey	bbey	bbiy	bbey	ttebbey	
eby ^w ed	b ^y ed	b ^y ed	b ^y id	b ^y id	ttibiy	
eby ^w el	d ^y el	d ^y el	d ^y il	d ^y el	ttedyal	
beqqi	/	/	/	/	/	
bber	/	/	/	/	/	
berri	/	/	/	/	/	
ebrec	/	/	/	/	/	
ebred	/	/	/	/	/	
ebred	/	/	/	/	/	
ebred	bred	bred	brid	bred	ttebrad	
ebrek	brek	brek	brik	brek	ttebrak	
barek	barek	burek	burek	barek	ttbarak	
ibrik	ibrik	berrick	berrick	ibrik	ttibrik	
ebren	bren	bren	brin	bren	ttebran	
ebreq	breq	breq	briq	breq	ttbarriq	Faire male
ebrex	/	/	/	/	/	
ebrez	brez	brez	briz	brez	ttebraz	
ebtel	btel	btel	btil	btel	ttebtal	
ebx ^w el	bxel	bxel	bxil	bxel	ttebxal	
ebx ^w eş	bxes	bxes	bxis	bxes	ttbexxis	
ebbez	/	/	/	/	/	
ebzed	/	/	/	/	/	
ebzeg	bzeg	bzeg	bzig	bzeg	ttebzag	
ebzer	bzer	bzer	bzir	bzer	ttbezzir	
ebeed	b ^e eed	b ^e eed	b ^e eid	b ^e eed	ttebead	
ebæet	/	/	/	/	/	

cebbi	cebbi	cebba	cebba	cebbi	ttcebbi	
ecbeḥ	cbeḥ	cbeḥ	cbiḥ	cbeḥ	tticbiḥ	
ecbek	cbek	cbek	cbik	cbek	ttcebbik	
cabek	cabek	cubek	cubek	cabek	ttcabak	
ecbeε	/	/	/	/	/	
cudd	cudd	cudd	cudd	cudd	ttcuddu	
cedhi	cedhi	cedha	cedha	cedhi	ttcedhi	
cceḍ	cceḍ	cceḍ	ccid	cceḍ	ttceceḍ	
ecḍef	cḍef	cḍef	cḍif	cḍef	ceṭṭef	agresser
ecḍeḥ	cḍeḥ	cḍeḥ	cḍiḥ	cḍeḥ	ceṭṭeḥ	
eccef	ccef	ccef	ccif	ccef	ttcecef	
cuff	cuff	cuff	cuff	cuff	ttcuffu	
ecfeq	/	/	/	/	/	
ecfeε	cfeε	cfeε	cfie	cfeε	ceffeε	
cafeε	cafeε	cafeε	cfie	cafeε	ttcafaε	
ecceg	cceḍ	cceḍ	ccid	cceḍ	ttceceḍ	
cihwi	cihwa	cihwa	cihwa	cihwa	ttcihwi	
ççeḥ	ççeḥ	ççeḥ	ççiḥ	ççeḥ	tteççeḥ	
eched	çhed	çhed	çhid	çhed	tteçhad	pâtir
eçen	/	/	/	/	/	
cukk	cukk	cukk	cukk	cukk	ttcukku	
cetki	cetki	cetka	cetka	cetki	ttcetki	
eclec	/	/	/	/	/	
eclex	clex	clex	clix	clex	tteclax	
ecleε	cleε	cleε	clie	cleε	tteclae	
ecmet	cmet	cmet	cmit	cmet	ttcemmit	
ecmex	/	/	/	/	/	
ecneg	cneg	cneg	cnig	cneg	ttcennig	
ecneε	/	/	/	/	/	
ecy ^w eb/e cyeb	cyeb	cyeb	cyib	cyeb	ttecyab	
ecy ^w el	cyel	cyel	cyil	cyel	ceyyel	
ceqq	/	/	/	/	/	
cuqq	cuqq	cuqq	cuqq	cuqq	ttcuqqu	
čçar	čçar	ččur	ččur	čçar	ttačçar	
ecṛeb	/	/	/	/	/	
ecṛeḍ	creḍ	creḍ	criḍ	creḍ	ttcerriḍ	
ecṛeḥ	creh	creh	crih	creh	ttecrah	
ecrek	crek	crek	crik	crek	ttecrak	
carek	carek	curek	curek	carek	ttcarak	
ecṛem	crem	crem	crim	crem	carrem	
ecṛeq	creq	creq	criq	creq	ttcerriq	
ecrew	crew	crew	criw	crew	cerrew	
ecree	creε	creε	criε	creε	ttcarrie	
careε	careε	cureε	cureε	careε	ttcaraε	
cetti	/	/	/	/	/	
ecḍen	/	/	/	/	/	
ecṭer	cṭer	cṭer	cṭir	cṭer	ttectar	

ecwed	cwed	cwed	cwid	cwed	cegged	
ciwer	ciwer	cawer	cawer	ciwer	ttcawar	
exec	exec	exec	cxic	exec	ttecxac	
ex ^w em/e cx ^w em	/	/	/	/	/	
ex ^w er	jxer	jxer	jxir	jxer	ttjexxir	
ccuci	/	/	/	/	/	
cayel	/	/	/	/	/	
ecæf	cæf	cæf	cæif	cæf	ttecæaf	
ecæel	cæel	cæel	cæil	cæel	ccaæel	
dbex	/	/	/	/	/	
dafeε	dafeε	dufeε	dufeε	dafeε	ttdafae	
dheb	/	/	/	/	/	
dhec	dhec	dhec	dhic	dhec	dehhec	
dhen	dhen	dhen	dhin	dhen	ttedhan	
dukk	/	/	/	/	/	
dker	/	/	/	/	/	
dull	/	/	/	/	/	
dleg	/	/	/	/	/	
ddem	ddem	ddem	ddim	ddem	ttaddam	
dden	addan	udden	uddin	addan	ttaddan	
edneb	dneb	dneb	dnib	dneb	ttednab	
dnes	/	/	/	/	/	
dyel	dyel	dyel	dyil	dyel	deyyel	
duqq	/	/	/	/	/	
edder	dder	dder	ddir	dder	ttidir	
edreg	dreg	dreg	drig	dreg	ttedrag	
edrem	drem	drem	drim	drem	ttedram	démolir
dres	/	/	/	/	/	
ddari	ddari	ddari	ddari	ddari	ttddari	
dreε	dreε	dreε	driε	dreε	ttedraε	
dwel	/	/	/	/	/	
dxem	/	/	/	/	/	
dyeq	dyeq	dyeq	dyiq	dyeq	ttdeyyiq	
ddez	ddez	ddez	Ddiz	ddez	tteddez	
ddei	ddeu	ddeu	ddei	ddeu	deεeu	
dæen	dæen	dæen	dæin	dæen	deεæen	
edbex	/	/	/	/	/	
dbeε	/	/	/	/	/	
dudd	/	/	/	/	/	
edfer	dfer	dfer	dfir	dfer	ttedfar	
edher	dher	dher	dhir	dher	ttedhar	
dill	ṭill	ṭall	ṭall	ṭill	ṭallay	
dleb	dleb	dleb	dlib	dleb	ṭṭalab	
edleḥ	/	/	/	/	/	
edlem	dlem	dlem	dlim	dlem	dellem	
edles	/	/	/	/	/	

ḍumm	/	/	/	/	/	
eḍmen	ḍmen	ḍmen	ḍmin	ḍmen	ḍemmen	
ḍurr	ḍurr	ḍurr	ḍurr	ḍurr	ttḍurru	
eḍreb	/	/	/	/	/	
ḍrec	ḍrec	ḍrec	ḍric	ḍrec	ḍerrec	chasser
ḍref	/	/	/	/	/	
eḍreg	ḍreg	ḍreg	ḍrig	ḍreg	ttḍerrig	
eḍreḥ	ḍreḥ	ḍreḥ	ḍriḥ	ḍrreḥ	ttḍdraḥ	Etendre par terre
eḍres	ḍres	ḍres	ḍris	ḍres	ttḍdras	
eḥtes	ḥtes	ḥtes	ḥtis	ḥtes	gḡan	
ḍaweε	/	/	/	/	/	
ḍeef	ḍeef	ḍeef	ḍeif	ḍeef	ttḍeaf	
efcel	fcel	fcel	Fcil	fcel	feččel	
efdeḥ	fdeḥ	fdeḥ	fḍiḥ	fdeḥ	ttḍdaḥ	
efḍel	/	/	/	/	/	
efḍer	fḍer	fḍer	fḍir	fḍer	fetter	
effeg	affeg	uffeg	uffig	affeg	ttaffeg	voler
efhem	fhem	fhem	Fhim	fhem	fehhem	
efhec	/	/	/	/	/	
efhem	/	/	/	/	/	
efjee	/	/	/	/	/	
fakk	fakk	fukk	fukk	fakk	ttfakka	
efles	fles	fles	Flis	fles	ttēflas	
efneε	/	/	/	/	/	
effey	ffey	ffey	ffiy	ffey	ttēffey	
efqeε	fqeε	fqeε	fqiε	fqeε	feqqeε	
effer	ffer	ffer	Ffir	ffer	ttēffer	
furr	/	/	/	/	/	
fuḥḥ	fuḥḥ	fuḥḥ	fuḥḥ	fuḥḥ	ttfuḥḥu	
ifrir	ifrir	ufrar	frar	ifrir	ttifrir	
efḥec	fḥeq	fḥeq	fḥiq	fḥeq	ttēfraq	
efḥed	fḥed	fḥed	fḥid	fḥed	ferred	
efḥed	/	/	/	/	/	
efreg	/	/	/	/	/	
efḥeḥ	fḥeḥ	fḥeḥ	fḥiḥ	fḥeḥ	ferreḥ	
efrek	frek	frek	frik	frek	ttēfrak	
efren	fren	fren	frin	fren	ferren	
efḥey	fḥey	fḥey	fḥiy	fḥey	ferreḥ	
efḥeq	fḥeq	fḥeq	fḥiq	fḥeq	ttēfraq	
fāḥeq	fāḥeq	fūḥeq	fūḥeq	fāḥeq	ttfāraq	
efres	fres	fres	fris	fres	ferres	
fāḥeḥ	fāḥeḥ	fūḥeḥ	fūḥeḥ	fāḥeḥ	ttfāḥeḥ	
frari	frari	frari	frari	frari	ttēfrari	
efrez	/	/	/	/	/	
efḥez	fḥez	fḥez	fḥiz	fḥez	ferrez	
efsed	fsed	fsed	fsid	fsed	fatted	
efser	fser	fser	fsir	fser	fetter	

efsex	fsex	fsex	fsix	fsex	tteksax	
efteḥ	/	/	/	/	/	
eftek	ftek	ftek	ftik	ftek	fettek	
eftel	ftel	ftel	ftil	ftel	fettel	
eften	/	/	/	/	/	
efteṛ	/	/	/	/	/	
efṭel	/	/	/	/	/	
efṭen	/	/	/	/	/	
fuxx	/	/	/	/	/	
efxes	/	/	/	/	/	
effeḏ	ffeḏ	ffeḏ	ffiz	fezz	tteffezz	
efæel	/	/	/	/	/	
ḡaber	gaber	guber	guber	gaber	ttgabar	
egdel	gdel	gdel	gdil	gdel	ttegdal	
egdem	/	/	/	/	/	
eg ^w dem	/	/	/	/	/	
ggaḯ	ggaḡ	gguḡ	gguḡ	ggaḡ	ttggaḡa	
ggaji	ggaḡi	gguḡa	gguḡa	ggaḡi	ttggaḡi	
gell	/	/	/	/	/	
eglez	/	/	/	/	/	
eg ^w med	/	/	/	/	/	
egmer	gmer	gmer	gmir	gmer	gemmer	
eg ^w mez	/	/	/	/	/	
ggani	ggani	gguni	gguni	ggani	ttggani	
ḡ ^w rec	/	/	/	/	/	
ḡren	/	/	/	/	/	
egres	gres	gres	gris	gres	gerres	
ḡareε	/	/	/	/	/	
gg ^w et	/	/	/	/	/	
egzem	gzem	gzem	gzim	gzem	gezzem	
egzer	gzer	gzer	gzir	gzer	gezzer	
hubb	/	/	/	/	/	
ehbej	hbej	hbej	hbij	hbej	hebbej	
ehbel	hbel	hbel	hbil	hbel	hebbel	
ehder	/	/	/	/	/	
ehbeṭ	/	/	/	/	/	
hucc	hucc	hucc	hucc	hucc	tthuccu	
hudd	hudd	hudd	hudd	hudd	tthuddu	
ehdef	/	/	/	/	/	
ehdem	/	/	/	/	/	
ehdeṛ	hḏer	hḏer	hḏir	hḏer	hedder	
heggi	heggi	hegga	hegga	heggi	ttheggi	
hajer	hajer	hujer	hujer	hajer	tthajar	
ehlek	hlek	hlek	hlik	hlek	hellek	
humm	humm	humm	humm	humm	tthummu	
ehmej	hmej	hmej	hmij	hmej	hemmej	
ehmel	hmel	hmel	hmil	hmel	hemmel	
henni	henni	henna	henna	henni	tthenni	

herri	herri	herra	herra	herri	ttherri	
ehreb	/	/	/	/	/	
ihriw	ihriw	hraw	hraw	ihriw	tthriw	
ehter	hter	hter	htir	hter	ttehtar	
huzz	huzz	huzz	huzz	huzz	tthuzzu	
ehzel	hzal	hzal	hzil	hzal	hezzel	
ehzem	/	/	/	/	/	
hibb	/	/	/	/	/	
ehbek	hbek	hbek	hbik	hbek	ttehbak	
ehbel	/	/	/	/	/	
ehbeq	/	/	/	/	/	
ehbes	hbes	hbes	hbis	hbes	hebbes	
hbes	hbes	hbes	hbes	hbes	hbes	
ehced	hced	hced	hcid	hced	ttehcad	
ehcer	hcer	hcer	hcir	hcer	ttehcar	
ehdef	/	/	/	/	/	
ehdiş	hwiğ	hwağ	hwağ	hwiğ	tthwiği	
ehdeq	hdeq	hdeq	hdiq	hdeq	heddeq	
hader	hader	huder	huder	hader	tthadar	
ehder	hder	hder	hdir	hder	hetter	
ehder	hder	hder	hdir	hder	hetter	
ehdem	hdem	hdem	hdim	hdem	hettem	
ehfed	hfed	hfed	hfid	hfed	heffed	
ehfer	/	/	/	/	/	
ehjeb	hjeb	hjeb	hjib	hjeb	hejjeb	
hukk	hukk	hukk	hukk	hukk	tthukku	
ehkem	hkem	hkem	hkim	hkem	hekkem	
ehker	/	/	/	/	/	
ehlel	/	/	/	/	/	
hull	/	/	/	/	/	
ehleb	/	/	/	/	/	
ehlef	/	/	/	/	/	
ehliş	hwağ	hwağ	hwağ	hwiğ	tthwiği	
ehlem	/	/	/	/	/	
ehleq	/	/	/	/	/	
ihliw	ihliw	hlaw	hlaw	ihliw	tthliw	
ehmed	hmed	hmed	hmid	hmed	tthemmid	
ehmel	/	/	/	/	/	
ehmeq	hmeq	hmeq	hmiq	hmeq	hemmeq	
ehmer	hmer	hmer	hmir	hmer	tthemmir	
ehmez	/	/	/	/	/	
hunnn	hunnn	hunnn	hunnn	hunnn	tthunnnu	
ihnin	ihnin	hnin	hnin	ihnin	tthnin	
ehnet	hnet	hnet	hnet	hnet	hennet	
ehnew	/	/	/	/	/	
ehqer	hqer	hqer	hqir	hqer	heqquer	
herri	/	/	/	/	/	
hareb	/	/	/	/	/	

ḥareb	ḥareb	ḥureb	ḥureb	ḥareb	tḥarab	
eḥrec	ḥrec	ḥrec	ḥric	ḥrec	tḥric	
eḥreḡ	/	/	/	/	/	
eḥrem	/	/	/	/	/	
eḥren	ḥren	ḥren	ḥrin	ḥren	ḥerren	
eḥreq	ḥreq	ḥreq	ḥriq	ḥreq	ḥerreq	
eḥreṣ	ḥres	ḥres	ḥris	ḥres	tḥeras	
eḥret	/	/	/	/	/	
eḥrez	ḥrez	ḥrez	ḥriz	ḥrez	tḥaraz	
ḥess	ḥess	ḥess	ḥess	ḥess	tḥessis	
ḥuss	ḥuss	ḥuss	ḥuss	ḥuss	tḥussu	
eḥseb	ḥseb	ḥseb	ḥsib	ḥseb	ḥetteb	
ḥaseb	ḥaseb	ḥuseb	ḥuseb	ḥaseb	tḥasab	
eḥsed	ḥsed	ḥsed	ḥsid	ḥsed	ḥessed	
ḥasef	/	/	/	/	/	
eḥsen	/	/	/	/	/	
eḥsel	ḥsel	ḥsel	ḥsil	ḥsel	ḥettel	
eḥtec	ḥtec	ḥtec	ḥtic	ḥtec	ḥettec	
eḥtil	/	/	/	/	/	
ḥiwec	ḥiwec	ḥawec	ḥawec	ḥiwec	tḥawac	
eḥwiḡ	iḥwiḡ	ḥwaḡ	ḥwaḡ	iḥwiḡ	tḥiwiḡi	
ḥiwel	ḥiwel	ḥawel	ḥawel	ḥiwel	tḥawal	
eḥweṣ	ḥwes	ḥwes	ḥwis	ḥwes	ḥegges	
ḥiwet	/	/	/	/	/	
seḥḥi	setḥi	setḥa	setḥa	setḥi	tḥsetḥi	
eḥzem	ḥzem	ḥzem	ḥzim	ḥzem	ḥezzem	
ḥazem	/	/	/	/	/	
eḥzen	ḥzen	ḥzen	ḥzin	ḥzen	ḥezzen	
ejbed	jbed	jbed	jbid	jbed	jebbed	
ejber	jber	jber	jbir	jber	jebber	
jadel	/	/	/	/	/	
ejder	/	/	/	/	/	
ejjed	/	/	/	/	/	
juff	/	/	/	/	/	
ejfel	/	/	/	/	/	
ejhed	jhed	jhed	jhid	jhed	jehhed	
ejhel	jhel	jhel	jhil	jhel	jehhel	
ejher	/	/	/	/	/	
ejlec	/	/	/	/	/	
ejlef	/	/	/	/	/	
ejleḥ	/	/	/	/	/	
ejleq	/	/	/	/	/	
ejjem	/	/	/	/	/	
ejmee	jmee	jmeē	jmiē	jmeē	jemmee	
ḡaneb	/	/	/	/	/	
ejneḥ	/	/	/	/	/	
janes	/	/	/	/	/	
ejneē	/	/	/	/	/	

ej ^w em	jyem	jyem	jyim	jyem	jeqqem	
ejq ^w er	/	/	/	/	/	
jujri	jujru	jujra	jujra	jujru	ttjujru	
jerri	jerri	jerra	jerra	jerri	ttjerri	
ejred	/	/	/	/	/	
ejreh	jreh	jreh	jrih	jreh	ttejrah	
ejrem	/	/	/	/	/	
jaweb	/	/	/	/	/	
ejwej	zwej	zwej	zwij	zwej	zeggej	
ejjex	jjex	jjex	jjix	jjex	ttejjex	
ejæer	jæer	jæer	jæir	jæer	ttejæar	
ḱubb	kubb	kubb	kubb	kubb	ttkubbu	
ek ^w bel	kbel	kbel	kbil	kbel	kebbel	
kaber	kaber	kaber	kuber	kaber	ttkabar	
ekcef	kcef	kcef	kcif	kcef	ttekcaf	
ekcem	kcem	kcem	kcim	kecem	kečcem	
ekfel	kfel	kfel	kfil	kfel	ttekfal	
ek ^w fer	kfer	kfer	kfir	kfer	ttekfar	
ekḱes	kḱes	kḱes	kḱis	kḱes	ttkaḱhis	
ekmec	kmec	kmec	kmic	kmec	ttekmac	
ek ^w med	/	/	/	/	/	
ekmel	kmel	kmel	kmil	kmel	ttekmal	
ekmen	kmen	kmen	kmin	kmen	ttekman	
ek ^w mer	/	/	/	/	/	
ekmes	kmes	kmes	kmis	kmes	ttekmas	
ekmez	kmez	kmez	kmiz	kmez	kemmez	
eknef	knef	knef	knif	knef	kennef	
ikniw	/	/	/	/	/	
ekker	kker	kker	kkir	kker	ttnekkar	
ḱurr	/	/	/	/	/	
ekred	kred	kred	kriđ	kred	ttekrađ	
ekref	kref	kref	kriř	kref	ttekrař	
ek ^w ref	/	/	/	/	/	
ekreh	kreh	kreh	krih	kreh	kerreh	
ekrem	/	/	/	/	/	
ekres	kres	kres	kris	kres	kerres	
ekrez	krez	krez	kriř	krez	ttekraz	
ekkes	kkes	kkes	kkis	kkes	ttekkes	
ekseb	kseb	kseb	ksib	kseb	ketteb	
iksin	/	/	/	/	/	
ekteb	kteb	kteb	ktib	kteb	ketteb	
ek ^w tef	/	/	/	/	/	
kkaw	kkaw	kkaw	kkaw	kkaw	ttkkaw	
ektil	ktil	ktal	ktal	ktil	ttektili	
ekyes	kyes	kyes	kyis	kyes	ttekyas	
ekḱeb	/	/	/	/	/	

eķēc	kēc	kēc	keic	kēc	ttekēc	
eķeer	/	/	/	/	/	
elled	/	/	/	/	/	
ellef	ltof	ltof	ltif	ltof	tteltaf	
elfey	/	/	/	/	/	
elfez	ffez	ffez	ffiz	ffez	tteffez	
elhet	/	/	/	/	/	
elhem	lhem	lhem	lhim	lhem	ttelham	
elheq	lheq	lheq	lhiq	lheq	ttelhaq	
ellem	llem	llm	llim	llm	ttellem	
lumm	lumm	lumm	lumm	lumm	ttlummu	
elmed	lmed	lmed	lmid	lmed	ttelmad	
elmej	/	/	/	/	/	
elley	/	/	/	/	/	
ely ^w et	lyet	lyet	lyit	lyet	ttelyat	
ilqiq	ilqiq	leqqaq	leqqaq	ilqqiq	ttilqqiq	
elqec	/	/	/	/	/	
elq ^w eđ	lqeđ	lqeđ	lqid	lqeđ	ttelqađ	
elqef	lqef	lqef	lqif	lqef	ttelqaf	
elles	/	/	/	/	/	
elseq	lseq	lseq	lsiq	lseq	ttelsaq	
elteh	/	/	/	/	/	
latem	/	/	/	/	/	
eltex	/	/	/	/	/	
eltec	/	/	/	/	/	
eltof	/	/	/	/	/	
ilwiq	ilwiq	lweq	lwiq	ilwiq	ttilwiq	
ellex	/	/	/	/	/	
elxes	lxes	lxes	lxis	lxes	lexxes	
elxez	lxez	lxez	lxiz	lxez	lexxez	
ellez	llez	llez	lliz	llez	ttellez	
ellaz	llaz	lluz	lluz	llaz	ttllaz	
elzem	lzem	lzem	lzim	lzem	ttelzam	
elēeb	lēeb	lēeb	lēib	lēeb	ttelēab	
emced	mced	mced	mcid	mced	ttemcađ	
emceh	mceh	mceh	mcih	mceh	ttemcah	
emcek	/	/	/	/	/	
mudd	mudd	mudd	mudd	mudd	ttmuddu	
emdel	mdel	mdel	mdil	mdel	meddel	
emger	mger	mger	mgir	mger	megger	
emhen	/	/	/	/	/	
emheq	mheq	mheq	mhiq	mheq	ttmeħhiq	
emheş	mheş	mheş	mhis	mheş	ttmeħhis	
emken	/	/	/	/	/	
mmel	/	/	/	/	/	
emleh	mleh	mleh	mlih	mleh	ttmellih	
emlek	mlek	mlek	mlik	mlek	ttemlak	
emleq	/	/	/	/	/	

menni	menni	menna	menna	menni	ttmenni
emneε	mneε	mneε	mnie	mneε	mmenneε
emmey	mmey	mmey	mmiy	mmey	ttemmey
muqel	muqel	muqel	muqel	muqel	ttmuqul
emred	/	/	/	/	/
emred	/	/	/	/	/
emrej	/	/	/	/	/
emres	/	/	/	/	/
emret	/	/	/	/	/
emsed	msed	msed	msid	msed	ttemsad
emseḥ	/	/	/	/	/
emsel	msel	msel	msil	msel	ttemsal
emsex	msex	msex	msix	msex	mettex
emṣed	/	/	/	/	/
emmet	mmet	mmut	mmut	mmet	ttmettat
matel	/	/	/	/	/
emzel	mzel	mzel	mzil	mzel	ttenzal
emeen	mēen	mēen	mēin	mēen	maēeen
enbec	/	/	/	/	/
enbet	/	/	/	/	/
enced	nced	nced	ncid	nced	ttencad
encef	/	/	/	/	/
encel	ncel	ncel	ncil	ncel	ttencal
encer	/	/	/	/	/
encew	ncew	ncew	nciw	ncew	ttencaw
endef	/	/	/	/	/
endeh	ndeh	ndeh	ndih	ndeh	neddeh
endem	ndem	ndem	ndim	ndem	ttendam
ender	/	/	/	/	/
ender	nder	nder	ndir	nder	nedder
ened	nneḍ	nneḍ	nniḍ	nneḍ	ttened
enfeḍ	nfeḍ	nfeḍ	nfiḍ	nfeḍ	ttenfad
enfeg	/	/	/	/	/
enfēḥ	nfeḥ	nfeḥ	nfiḥ	nfeḥ	ttenfah
enfel	nfel	nfel	nfil	nfel	ttenfal
enfeq	nfeq	nfeq	nfiq	nfeq	ttenfaq
enfer	/	/	/	/	/
enfes	nfes	nfes	nfis	nfes	ttenfas
enfex	/	/	/	/	/
enfex	/	/	/	/	/
enfex	/	/	/	/	/
enfε	nfeε	nfeε	nfiε	nfeε	ttenfæ
engeb	ngeb	ngeb	ngib	ngeb	ttengab
eng ^w ed	/	/	/	/	/
engef	ngef	ngef	ngif	ngef	ttengaf
engēḥ	/	/	/	/	/
eng ^w eh	/	/	/	/	/
enger	nger	nger	ngir	nger	negger
naḡes	/	/	/	/	/

ngugi	/	/	/	/	/	
enhel	/	/	/	/	/	
enheq	/	/	/	/	/	
enher	nher	nher	nhir	nher	ttenhar	
enhet	/	/	/	/	/	
enḥel	nḥel	nḥel	nḥil	nḥel	neḥḥel	
enḥes	nḥes	nḥes	nḥis	nḥes	ttenḥas	
enjem/e nḡem	njem	njem	njim	njem	ttenjam	
enjer	nḡer	nḡer	nḡir	nḡer	ttenḡar	
enjeε	nḡee	nḡee	nḡie	nḡee	ttenḡae	
enḡeb	/	/	/	/	/	
enḡer	nker	nker	nkir	nker	ttenkar	
enḡez	nkez	nkez	nkiz	nkez	ttenkaz	
nnal	nnal	nnal	nnul	nnal	ttнал	
nnam	nnam	nnum	nnum	nnam	ttnam	
namer	namer	numer	numer	namer	ttnamar	
enyeб	/	/	/	/	/	
enyec /enqec	nqec	nqec	nqic	nqec	ttenqac	
eny ^w ec	/	/	/	/	/	
enyed / enqed	nyed	nyed	nyid	nyed	ttenyad	
enyed	/	/	/	/	/	
eny ^w ej	/	/	/	/	/	
enyel	nyel	nyel	nyil	nyel	ttenyal	
enyer / enqer	/	/	/	/	/	
enyес / enqes	nqes	nqes	nqis	nqes	ttenqas	
neqqi	neqqi	neqqa	neqqa	neqqi	ttneqqi	
enqeb	nqeb	nqeb	nqib	nqeb	ttenqab	
enqec	nqec	nqec	nqic	nqec	ttenqac	
enqed	nyed	nyed	nyid	nyed	ttenyad	
enq ^w ej	/	/	/	/	/	
enqer	/	/	/	/	/	
naqer	/	/	/	/	/	
enqes	nqes	nqes	nqis	nqes	ttenqas	
enqee enqae	/	/	/	/	/	
enseb	/	/	/	/	/	
enser	nser	nser	nsir	nser	ttensar	
ensex	/	/	/	/	/	
enḡeb	/	/	/	/	/	
enḡef	/	/	/	/	/	
enḡeḥ	nḡeḥ	nḡeḥ	nḡiḥ	nḡeḥ	ttenḡaḥ	
enḡel	nḡel	nḡel	nḡil	nḡel	ttenḡal	
enḡer	/	/	/	/	/	

entab	/	/	/	/	/	
enteg	/	/	/	/	/	
entel	/	/	/	/	/	
entam	/	/	/	/	/	
eñeđ	nñeđ	nñeđ	nñid	nñeđ	ttenñeđ	
eñteg	nñteg	nñteg	nñtig	nñeđ	ttenñtag	
eñteħ	/	/	/	/	/	
iñtiħ	/	/	/	/	/	
eñtel	nñtel	nñtel	nñtil	nñtel	ttenñtal	
eñteq	nñteq	nñteq	nñtiq	nñteq	ttenñtaq	
eñteř	nñteř	nñteř	nñtir	nñteř	ttenñtar	
eñtez	/	/	/	/	/	
eñtae	/	/	/	/	/	
niwel	niwel	nawel	nawel	niwel	ttnawal	
enxel	/	/	/	/	/	
enxem	/	/	/	/	/	
enxeř	/	/	/	/	/	
enzef	nzef	nzef	nzif	nzef	ttenzaf	
enzel	/	/	/	/	/	
enzer	nser	nser	nsir	nser	ttensar	
enzeř	nzer	nzer	nzir	nzer	ttenzar	
nazeε	nazeε	nuzee	nuzee	nazeε	ttnazeε	
neel	neel	neel	neil	neel	tteneal	
eneem	/	/	/	/	/	
neer	/	/	/	/	/	
neet	/	/	/	/	/	
enzef	nzef	nzef	nzif	nzef	nezzef	
yebbi	yebbi	yebba	yebba	yebbi	tteybbi	
ey ^w bel	ybel	ybel	ybil	ybel	tteybal	
ey ^w ben	yben	yben	ybin	yben	tteyban	
eyber	/	/	/	/	/	
yucc	yucc	yucc	yucc	yucc	ttyuccu	
eyder	yder	yder	ydir	yder	yedder	
eydeb	/	/	/	/	/	
eydel	ydel	ydel	ydil	ydel	yettel	
eydeř	/	/	/	/	/	
eyfel	yfel	yfel	yfil	yfel	yeffel	
ey ^w fer	yfer	yfer	yfir	yfer	tteyfar	
yafer	yafer	yufer	yufer	yafer	tyafar	
yull	yull	yull	yull	yull	ttyullu	
qq ^w el	qqel	qqel	qqil	qqel	tteqqel	
eyleb	yleb	yleb	ylib	yleb	tteylab	
eyled	yled	yled	yliđ	yled	tteylad	
ey ^w lef	/	/	/	/	/	
eyleq	yleq	yleq	yliq	yleq	tteylaq	
yumm	yumm	yumm	yumm	yumm	ttyummu	
qqim	qqim	qqim	qqim	qqim	ttyama	
eymed	/	/	/	/	/	

eymel	ymel	ymel	ymil	ymel	yemmel	
eymeq	/	/	/	/	/	
eymes	/	/	/	/	/	
eymeş	ymeş	ymeş	ymiz	ymeş	tteymaş	
yenni	yenni	yenna	yenna	yenni	tt'yenni	
yunfu	yunfu	yunfa	yunfa	yunfu	tt'yunfu	
yunzu	yunzu	yunza	yunza	yunzu	tt'yunzu	
eşret	/	/	/	/	/	
yurş	yurr	yurr	yurr	yurr	tt'yurru	
qqar	qqar	qqur	qqur	qqar	tt'yar	
yerri	yerri	yerra	yerri	yerri	tt'yerri	
eşrec	/	/	/	/	/	
eşrem	yrem	yrem	yrim	yrem	tteyram	
eşreq	yreq	yreq	yriq	yreq	tteyraş	
eşres	/	/	/	/	/	
eşrez	/	/	/	/	/	
eşsel	/	/	/	/	/	
eşşeb	yşeb	yşeb	yşib	yşeb	yetteş	
yutt	/	/	/	/	/	
y ^w eş	/	/	/	/	/	
eşdes	/	/	/	/	/	
eşwed	/	/	/	/	/	
yiwel	yiwel	yawel	yawel	yiwel	tt'yawal	
işwis	işwis	ywas	ywas	işwis	ttişwis	
eşyer	/	/	/	/	/	
yezz	yezz	yezza	yezza	yezz	tteyşaz	
iş ^w zif	yşif	yşif	yşif	yşif	ttişzif	
eşzel/ eş ^w zel	yşel	yşel	yşil	yşel	tteyşal	
eqbec	/	/	/	/	/	
eqbeş / eq ^w beş	/	/	/	/	/	
eqbeş	qbeş	qbeş	qbiş	qbeş	tteqbah	
eqbel	qbel	qbel	qbil	qbel	qebbel	
eqber/eş ^w ber	qber	qber	qbir	qber	tteqbar	
qqac	/	/	/	/	/	
qucc	/	/	/	/	/	
eqcer/eş ^w cer	qcer	qcer	qcir	qcer	tteqcar	
eqceş	/	/	/	/	/	
qqed	/	/	/	/	/	
qadd	/	/	/	/	/	
eqdec	qdec	qdec	qdic	qdec	qeddec	
eqdef	qdef	qdef	qdif	qdef	tteqdaf	
eqdeş	/	/	/	/	/	
eqdem	qdem	qdem	qdim	qdem	ttiqdim	
qadem	/	/	/	/	/	

qader	qader	quder	quder	qader	ttqadar	
eqdew	/	/	/	/	/	
eqdeb	/	/	/	/	/	
eqdeε	qdeε	qdeε	qdiε	qdeε	tteqdaε	
eqteε	/	/	/	/	/	
qadeε	qadeε	qudeε	qudeε	qadeε	ttqadaε	
eqfel	qfel	qfel	qfil	qfel	tteqfal	
eqfer	/	/	/	/	/	
eqfufi	qfufi	qfifi	qfufi	qfufi	qfufuy	
eqfez	qfez	qfez	qfiz	qfez	tteqfaz	
eqher	/	/	/	/	/	
eq ^w jej	/	/	/	/	/	
iqlil	iqlil	qlil	qlil	iqlil	ttiqlil	
eqleb	qleb	qleb	qlib	qleb	tteqqlab	
eq ^w lec	/	/	/	/	/	
eq ^w lem	/	/	/	/	/	
eqleq	qleq	qleq	qleq	qleq	ttqelliq	
eqleε	qleε	qleε	qliε	qleε	qelleε	
qqim	qqim	qqim	qqim	qqim	tyama	
eqmec	qmec	qmec	qmic	qmec	tteqmac	
eqmed	/	/	/	/	/	
eqmeh	/	/	/	/	/	
eqmer	/	/	/	/	/	
eqqen	qqen	qqen	qqin	qqen	tteqqen	
eqneε	qneε	qneε	qniε	qneε	tteqnaε	
qirr	qirr	qirr	qirr	qirr	ttqirri	
eqreb	qreb	qreb	qrib	qreb	tteqrab	
eq ^w rec	/	/	/	/	/	
eqred	qred	qred	qrid	qred	tteqrad	
eqreh	qreh	qreh	qrih	qreh	qerreh	
iqrih	/	/	/	/	/	
eq ^w rem	/	/	/	/	/	
eqren	/	/	/	/	/	
eq ^w res	/	/	/	/	/	
eqreş	qres	qres	qris	qres	tteqras	
qareε	qareε	qureε	qureε	qareε	ttqaraε	
eqqes	qqes	qqes	qqis	qqes	tteqqes	
qass	/	/	/	/	/	
qiss	qiss	qass	qass	qiss	ttqissi	
eqsed	qsed	qsed	qsid	qsed	tteqsad	
eqsef	qsef	qsef	qsif	qsef	ttqessif	
eqseh	qseh	qseh	qsih	qseh	qessih	
eqsem	/	/	/	/	/	
eq ^w sem	/	/	/	/	/	
eqtel	/	/	/	/	/	
qetți	/	/	/	/	/	
qewwi	/	/	/	/	/	
qebb ^w i	/	/	/	/	/	

eqwed	/	/	/	/	/	
eqyes	/	/	/	/	/	
qazem	/	/	/	/	/	
eqæed	qæed	qæed	qæid	qæed	tteqæad	
iqæid	/	/	/	/	/	
ṛebbi	rebbi	rebba	rebba	rebbi	ttrebbi	
erbeḡ	/	/	/	/	/	
erbeḥ	rbeḥ	rbeḥ	arbiḥ	rbeḥ	rebbeḥ	
rabeε/ra weε	rabeε	rabeε	rubeε	rabeε	ttrabae	
ṛucc	rucc	rucc	rucc	rucc	ttruccu	
eṛced	/	/	/	/	/	
eṛceḥ	/	/	/	/	/	
ercel	/	/	/	/	/	
eṛcem	/	/	/	/	/	
eṛcex	/	/	/	/	/	
eṛdeḥ	rdeḥ	rdeḥ	rdiḥ	rdeḥ	reddeḥ	
erdem	/	/	/	/	/	
eṛdem	rdem	rdem	ardim	rdem	reddem	
eṛdex	rdex	rdex	rdix	rdex	reddex	
eṛdeb	rdeb	rdeb	arḍib	rdeb	reḍdeb	
eṛdel	rḍel	rḍel	arḍil	rḍel	reṭtel	
erfed	rfed	rfed	arfid	rfed	reffed	
erfen	/	/	/	/	/	
eṛfeq	/	/	/	/	/	
ṛafeq	/	/	/	/	/	
erfes	/	/	/	/	/	
eṛfeε	/	/	/	/	/	
erḡel	rgel	rgel	argil	rgel	reggel	
erḡem	rgem	rgem	argim	rgem	reggem	
erḡen	/	/	/	/	/	
eṛheb	/	/	/	/	/	
eṛheḍ	/	/	/	/	/	
eṛhef	/	/	/	/	/	
eṛheḵ	/	/	/	/	/	
erhem	/	/	/	/	/	
eṛhen	/	/	/	/	/	
eṛḥeb	/	/	/	/	/	
eṛḥel	/	/	/	/	/	
eṛḥem	rḥem	rḥem	arḥim	rḥem	tterḥam	
eṛjeh	/	/	/	/	/	
eṛjem	rjem	rjem	arjim	rjem	rejjem	
erjen	/	/	/	/	/	
eṛjeq	/	/	/	/	/	
eṛjee	/	/	/	/	/	
eṛkeḅ	rkeḅ	rkeḅ	arkib	rkeḅ	ttarkab	
eṛkec / erḵ ^w ec	rkec	rkec	rkic	rkec	tterkac	

erked	rked	rked	arkid	rked	ttarkad	
er _k ed	/	/	/	/	/	
er _k eh	rked	rked	arkid	rked	ttarkad	
er _k em	rkem	rkem	arkim	rkem	ttarkam	
er _k en	/	/	/	/	/	
erk ^w es	/	/	/	/	/	
er _k es	/	/	/	/	/	
er _k ez	/	/	/	/	/	
er _k eε	/	/	/	/	/	
e _r mec	rmec	rmec	armic	rmec	remmec	
ermed	/	/	/	/	/	
e _r meg	/	/	/	/	/	
e _r mej	/	/	/	/	/	
e _r mel	řmel	řmel	řmil	řmel	řemmel	
e _r meq	/	/	/	/	/	
ermez	/	/	/	/	/	
e _r mez	/	/	/	/	/	
e _r yeb	ryeb	ryeb	aryib	ryeb	reyyeb	
e _r y ^w el	/	/	/	/	/	
irriq	irriq	irriq	irriq	irriq	ttirriq	
e _r qem	rqem	rqem	arqim	rqem	reqqem	
e _r qes	/	/	/	/	/	
e _r şed	/	/	/	/	/	
ersel	/	/	/	/	/	
e _r şel/ e _r şel	/	/	/	/	/	
e _r şem	/	/	/	/	/	
ertek	/	/	/	/	/	
ertem	/	/	/	/	/	
erwel	rwel	rwel	arwil	rwel	reggel	
e _r xef	rxef	rxef	rxif	rxef	ttirxif	
e _r x ^w em	/	/	/	/	/	
e _r xes	rxes	rxes	rxis	rxes	ttirxis	
i _r xis	irxis	rxes	rxis	rxes	ttirxis	
e _r ti _h	/	/	/	/	/	
e _r rez	rez	arez	riz	rez	trruzu	
erzef	rzef	rzef	rzif	rzef	rezzef	
i _r zig	irzig	arzag	arzag	irzig	ttirzig	
e _r zen	rzen	rzen	rzin	rzen	rezen	
e _r zeq	rzeq	rzeq	rziq	rzeq	ttrezziq	
e _r æec	/	/	/	/	/	
e _r æed	ræed	ræed	ræed	ræed	reæeed	
sibb	/	/	/	/	/	
esbed	/	/	/	/	/	
esbek	sbek	sbek	sbik	sbek	ttesbak	
esbey	sbey	sbey	sbiy	sbey	ttesbay	
esbeq	/	/	/	/	/	
essed	ssed	ssed	ssid	ssed	ttessed	

esdeq	/	/	/	/	/	
sedhi	sethi	setha	setha	sethi	ttsethi	
essef	/	/	/	/	/	
susef	susef	ssusef	ssusef	susef	ssussuf	
esfed	sfed	sfed	sfið	sfed	sseffed	
esfeh	/	/	/	/	/	
esg ^w ed	/	/	/	/	/	
eshel	shel	shel	shil	shel	ttishil	
sahel	sahel	suhel	suhel	sahel	ttsahal	
eshen	shen	shen	shin	shen	sehhen	
esheq	/	/	/	/	/	
sked	sked	sked	skid	sked	sekked	
eskef	skef	skef	skif	skef	ssekkef	
esker	sker	sker	skir	sker	tteskar	
esker	/	/	/	/	/	
esk ^w er	/	/	/	/	/	
esleb	sleb	sleb	slib	sleb	selleb	
eslek	slek	slek	slik	slek	ttsellik	
salek	/	/	/	/	/	
eslem	/	/	/	/	/	
salem	/	/	/	/	/	
esley	/	/	/	/	/	
eslex	slex	slex	slix	slex	ttsellix	
summ	/	/	/	/	/	
semmi	semmi	semma	semma	semmi	ttsemmi	
esmed	smed	smed	smed	smed	ttsemmid	
esmee	/	/	/	/	/	
issin	issin	ssen	ssin	issin	ttissin	
esyel	/	/	/	/	/	
seqqi	seqqi	seqqa	seqqa	seqqi	ttseqqi	
sqed	sqed	sqed	sqið	sqed	seqqed	
esser	sser	sser	ssir	sser	ttesser	
isrir	/	/	/	/	/	
serbi	/	/	/	/	/	
esred	/	/	/	/	/	
esref	/	/	/	/	/	
esrem	/	/	/	/	/	
eswed	swed	swed	swid	swed	ttsewwid	
esxeb	/	/	/	/	/	
esxec	sxec	sxec	sxic	sxec	ttsexac	
esxed	sxed	sxed	sxið	sxed	ttsexad	
esxeṛ	/	/	/	/	/	
seyyi	seyyi	seyya	seyya	seyyi	ttseyyi	
sayes	sayes	sayes	suyes	says	ttsayas	
esæed	/	/	/	/	/	
saæef	saæef	suæef	suæef	saæef	ttsaæaf	
subb	subb	subb	subb	subb	ttsubbu	
esbed	/	/	/	/	/	

eşbeh	sbeh	sbeh	sbiḥ	sbeh	ttsebbiḥ	
eşsed	ssed	ssed	ssiḍ	ssed	ttessed	
eşdef	/	/	/	/	/	
şedhi	sethi	setha	setha	sethi	ttsethi	
şeffi	şeffi	şesfa	şeffi	şeffi	ttşeffi	
eşfeh	/	/	/	/	/	
eşfen	/	/	/	/	/	
şafēr	safer	sufer	sufer	safer	tt safar	
şehhi	sehhi	sehha	sehha	sehhi	ttsehhi	
şaheb	/	/	/	/	/	
eşleb	/	/	/	/	/	
eşleḥ	/	/	/	/	/	
eşneb	/	/	/	/	/	
eşnee	snee	snee	sniē	snee	tt sennie	
eşree	şree	şree	şrie	şree	tt eşrae	
eşweb	şweb	şweb	şwib	şweb	tt eşwab	
eşyed	/	/	/	/	/	
eşzeb	/	/	/	/	/	
etbet	tbet	tbet	tbit	tbet	ttbetbit	
etbeε	tbeε	tbeε	tbiε	tbeε	ttbaeε	
etḥef	/	/	/	/	/	
eṭṭel	ttel	ttel	ttil	ttel	ttettel	
etlef	tlef	tlef	tlif	tlef	ttetlaf	
etmer	/	/	/	/	/	
etqel	/	/	/	/	/	
êtrek	/	/	/	/	/	
etrek	/	/	/	/	/	
etwel	twel	twel	twil	twel	ttewwil	
etwer	/	/	/	/	/	
eḍbeε	ḍbeε	ḍbeε	ḍbiε	ḍbeε	ttedbaeε	
eṭṭeḍ	ṭṭeḍ	ṭṭeḍ	ṭṭiḍ	ṭṭeḍ	ttetṭeḍ	
eṭṭef	ṭṭef	ṭṭef	ṭṭif	ṭṭef	ttatṭaf	
ṭṭaḥ	ṭṭaḥ	ṭṭaḥ	ṭṭaḥ	ṭṭaḥ	ttṭṭaḥ	
eḍleb	/	/	/	/	/	
eḍleq	ḍleq	ḍleq	ḍliq	ḍleq	ttedlaq	
eṭṭlee	/	/	/	/	/	
eḍmeε	ḍmeε	ḍmeε	ḍmiε	ḍmeε	ṭṭamaeε	
eḍreh	ḍreh	ḍreh	ḍriḥ	ḍreh	ttedraḥ	
ṭṭes	ṭṭes	ṭṭes	ṭṭis	ṭṭes	ggan	
ṭṭee	/	/	/	/	/	
ṭṭeen	/	/	/	/	/	
ḍeen	/	/	/	/	/	
weddi	/	/	/	/	/	
ewdec	/	/	/	/	/	
ewdee	/	/	/	/	/	
wadeε	/	/	/	/	/	
weffi	/	/	/	/	/	
wafeq	wafeq	wufeq	wufeq	wafeq	ttwafaq	

ewġef	/	/	/	/	/	
wehhi	wehhi	wehha	wahha	wahha	ttwehhi	
ewheb	/	/	/	/	/	
ewhem	whem	whem	whim	whem	ttewham	
wehhi	/	/	/	/	/	
ewheċ	wheċ	wheċ	wħic	wheċ	ttiwhic	
awhed	/	/	/	/	/	
ewhel	whel	whel	wħil	whel	ttewħal	
ewjeb	/	/	/	/	/	
wajeb	/	/	/	/	/	
ewjed	wjed	wjed	wjid	wjed	ttewjad	
wajeh	/	/	/	/	/	
ewjee	/	/	/	/	/	
wekki	/	/	/	/	/	
welli	/	/	/	/	/	
walef	/	/	/	/	/	
walem	/	/	/	/	/	
ewles	/	/	/	/	/	
wanes	wanes	wunes	wunes	wanes	ttwanas	
ewqem	wqem	wqem	wqim	wqem	ttewqam	
ewqet	/	/	/	/	/	
ewqee	/	/	/	/	/	
werri	/	/	/	/	/	
iwriy	iwriy	werriy	werriy	iwriy	ttiwriy	
ewret	wret	wret	writ	wret	ttewrat	
ewsem	wsem	wsem	wsim	wsem	ttewsam	
ewseq	/	/	/	/	/	
ewsex	msex	msex	msix	msex	mettex	
ewsee	wsee	wsee	wsie	wsee	ttewsee	
iwsie	iwsie	wessie	wessie	iwsie	ttiwsie	
wessi	wessi	wessa	wessa	wessi	ttwessi	
ewşef	/	/	/	/	/	
ewşel	/	/	/	/	/	
wetți	/	/	/	/	/	
ewxed	wxed	wxed	wxid	wxed	ttwexxid	
ewxem	/	/	/	/	/	
ewzen	wzen	wzen	wzin	wzen	ttewzan	
ewzee	/	/	/	/	/	
eweed	weed	weed	weid	weed	waeed	
eweer	aer	uer	ueir	aer	ttaer	
iweir	/	/	/	/	/	
exbec	xbec	xbec	xbic	xbec	xebbec	
exbed	xbed	xbed	xbid	xbed	xebbed	
exbet	/	/	/	/	/	
xxuc	xxuc	xxuc	xxuc	xxuc	ttxxuccu	
excen	/	/	/	/	/	
etxed	/	/	/	/	/	
exdem	xdem	xdem	xdim	xdem	xeddem	

exdeε	xdeε	xdeε	xdiε	xdeε	xeddeε	
exdeβ	xdeβ	xdeβ	xdiβ	xdeβ	xetteβ	
exdef	xdef	xdef	xdif	xdef	xettef	
xeffi	/	/	/	/	/	
ixfif	ixfif	ixfif	ixfif	ixfif	ttixfif	
xelli	/	/	/	/	/	
exleđ	xleđ	xleđ	xliđ	xleđ	ttexlađ	
exlef	xlef	xlef	xlif	xlef	xellef	
exleq	xleq	xleq	xliq	xleq	ttexlaq	
exleş	xles	xles	xlis	xles	ttxellis	
ex ^w leε	xleε	xleε	xliε	xleε	xelleε	
ex ^w mej	/	/	/	/	/	
ex ^w mer	xmer	xmer	xmir	xmer	xemmer	
exneq	xneq	xneq	xniq	xneq	ttexnaq	
exnez	xnez	xnez	xniz	xnez	xennez	
exreb	xreb	xreb	xrib	xreb	xerreb	
ex ^w ređ	/	/	/	/	/	
ex ^w ref	/	/	/	/	/	
exrem	/	/	/	/	/	
exreq	/	/	/	/	/	
exrez	/	/	/	/	/	
exsef	xsef	xsef	xsif	xsef	xettef	
exseř	xser	xser	xsir	xser	xetter	
exšem	/	/	/	/	/	
xaşş	xass	xuss	xuss	xass	ttxass	
extem	/	/	/	/	/	
exten	xten	xten	xtin	xten	xetten	
extir	xtir	xtar	xtar	xtir	ttextiri	
xetți	xetți	xetța	xetța	xetți	ttxetți	
xayel	xayel	xuyel	xuyel	xayel	ttxayal	
exzem	/	/	/	/	/	
exzen	xzen	xzen	xzin	xzen	xezzen	
exzeř	xzer	xzer	xzir	xzer	ttxezzir	
ẓẓı̣ẓ	ẓı̣ẓ	ẓaẓ	ẓaẓ	ẓı̣ẓ	ttẓı̣ẓı̣	
ezber / ezber	zber	zber	zbir	zber	zerber	
izdig	izdig	zdeg	zdig	izdig	ttizdig	
ezdeh	/	/	/	/	/	
ezdel	zdel	zdel	zdil	zdel	zeddel	
ezdem	zdem	zdem	zdim	zdem	zeddem	
ezdem	zdem	zdem	zdim	zdem	zeddem	
ezdey	zdey	zdey	zdiy	zdey	zeddey	
ezdeh	zdeh	zdeh	zdih	zdeh	zeddeh	
ezzeř	/	/	/	/	/	
zuff	zuff	zuff	zuff	zuff	ttzuffu	
ezzeř	/	/	/	/	/	
ezzeg	zzeg	zzeg	zzig	zzeg	ttezzeg	
zeggi	/	/	/	/	/	

ezġel	zġel	zġel	zġil	zġel	ttezġal	
ezġen	zġen	zġen	zġin	zġen	ttzegġin	
ezġer	zġer	zġer	zġir	zġer	zegġer	
ezħef	zħef	zħef	zħif	zħef	ttezħaf	
ezher	zher	zher	zhir	zher	zehher	
ezħeđ	/	/	/	/	/	
ezħel	/	/	/	/	/	
ezkem	/	/	/	/	/	
ezzel	zzel	zzel	zzil	zzel	ttezzel	
azzel	azzel	uzzel	uzzil	azzel	ttazzal	
ezleđ	/	/	/	/	/	
ezlef	zlef	zlef	zlif	zlef	ttezlaf	
ezleg	zleg	zleg	zlig	zleg	zelleg	
ezlem	zlem	zlem	zlim	zlem	ttezlam	
ezleq	/	/	/	/	/	
ezleť	/	/	/	/	/	
ezlez	zlez	zlez	zliz	zlez	ttzelliz	
ezzem	zzem	zzem	zzim	zzem	ttezzem	
ezzem	zzem	zzem	zzim	zzem	ttezzem	
ezmed	zmed	zmed	zmid	zmed	ttezmađ	
ezmek	zmek	zmek	zmik	zmek	ttzemmik	
ezmer	zmer	zmer	zmir	zmer	ttizmir	
zuzen	zuzen	zuzen	zuzen	zuzen	zzuzzun	
ezyeb	zyeb	zyeb	zyib	zyeb	ttezyab	
ezyel	/	/	/	/	/	
ezqef	zqef	zqef	zqif	zqef	zeqqef	
ezqem	/	/	/	/	/	
ezzer	zzer	zzer	zzir	zzer	ttezzer	
ezreb	/	/	/	/	/	
ezreq	/	/	/	/	/	
ezreε	zreε	zreε	zriε	zreε	zerreε	
ezwec	/	/	/	/	/	
ezwej	zwej	zwej	zwijs	zwej	zeggej	
ezwel	/	/	/	/	/	
ezwey	/	/	/	/	/	
izwiy	izwiy	zwey	zwijs	izwiy	ttizwiy	
ezwer	zwer	zwer	zwijs	zwer	ttezwar	
zwir	zwir	zwar	zwar	zwir	zeggir	
zuxx	zuxx	zuxx	zuxx	zuxx	ttzuxxu	
ezyen	zyen	zyen	zyin	zyen	ttizyin	
izyin	izyin	zyen	zyin	izyin	ttizyin	
ezzeε	/	/	/	/	/	
ezzeđ	/	/	/	/	/	
ezzeř	zeř	zeř	zeif	zeř	zeεzeř	
ezzeq	zeq	zeq	zeiq	zeq	zeεzeq	
εbbi	εbbi	εbba	εbba	εbbi	ttεbbi	
εbed	εbed	εbed	εbid	εbed	εbbed	
εbež	/	/	/	/	/	

eceq	/	/	/	/	/	
ecer	/	/	/	/	/	
eudd	eudd	eudd	eudd	eudd	ttēuddu	
ēddi	ēddi	ēdda	ēdda	ēddi	ttēdday	
ēdem	ēdem	ēdem	ēdim	ēdem	ēddem	
ēder	ēder	ēder	ēdir	ēder	ēdder	
ēder	/	/	/	/	/	
ēdef	ēdef	ēdef	ēdif	ēdef	ēttēf	
ēdel	ēdel	ēdel	ēdil	ēdel	ēttēl	
ēdem	/	/	/	/	/	
ēdes/ ēdeš	ēdes	ēdes	ēdis	ēdes	ēttēs	
ēfeĵ	/	/	/	/	/	
ēfen	/	/	/	/	/	
ēfer	/	/	/	/	/	
ēfes	ēfes	ēfes	ēfis	ēfes	ēffes	
ēgēz	ēdez	ēdez	ēdiz	ēdez	ēddez	
ēahed	ēahed	ēuhed	ēuhed	ēahed	ttēahad	
ēuĵĵ	/	/	/	/	/	
ēĵeb	ēĵeb	ēĵeb	ēĵib	ēĵeb	ttēāĵab	
ējel	ējel	ējel	ējil	ējel	ējjel	
ējen	/	/	/	/	/	
ēkki	ēkki	ēkka	ēkka	ēkki	ttēkki	
ēkef	ēkef	ēkef	ēkif	ēkef	ttēkaf	
ēkes	ēkes	ēkes	ēkis	ēkes	ttēkas	
ēlef	ēlef	ēlef	ēlif	ēlef	ēllef	
ēlek	/	/	/	/	/	
ēlem	ēlem	ēlem	ēlim	ēlem	ttēlam	
ēelli	ēelli	ēella	ēella	ēelli	ttēelli	
ēemel	/	/	/	/	/	
ēemer	ēemer	ēemer	ēmir	ēemer	ttēemmir	
ēenni	ēenni	ēenna	ēenna	ēenni	ttēenni	
ēaned	ēaned	ēuned	ēuned	ēaned	ttēanad	
ēaqeb	ēaqeb	ēuqeb	ēuqeb	ēaqeb	ttēaqab	
ēqel	ēqel	ēqel	ēqil	ēqel	ēqqel	
ēqer	/	/	/	/	/	
ēređ	ēređ	ēređ	ēriđ	ēređ	ttērađ	
ēriđ	/	/	/	/	/	
ēref	/	/	/	/	/	
ēreġ	/	/	/	/	/	
ērek	ērek	ērek	ērik	ērek	ēerrek	
ēreq	ēreq	ēreq	ēriq	ēreq	ttēraq	
ēreš	/	/	/	/	/	
ēerri	ēerri	ēerra	ēerra	ēerri	ttēerri	
ēass	ēass	ēuss	ēuss	ēass	ttēassa	
ēesel	/	/	/	/	/	
ēešer	/	/	/	/	/	
ēeteb	ēeteb	ēeteb	ētib	ēeteb	ēetteb	

eeteq	eteq	eteq	etiq	eteq	etteq	
eeter	Amyag aherfi bu krađ n tergalin deg temnađt n Burđ Mira					
eedel						
eiwed	eiwed	ɛawed	ɛawed	eiwed	ttɛawad	
eewej	ewej	ɛwej	ɛwij	ewej	ɛeggej	
eiwen	eiwen	ɛawen	ɛawen	eiwen	ttɛawan	
eiwez	eiwez	ɛawez	ɛawz	eiwez	ttɛawaz	
eeyed	/	/	/	/	/	
ɛayen	/	/	/	/	/	
ɛayer	ɛayer	ɛuyer	ɛuyer	ɛayer	ttɛayar	
ɛuzz	ɛuzz	ɛuzz	ɛuzz	ɛuzz	ttɛuzzu	
ieziz	ieziz	ɛziz	ɛziz	ieziz	ttieziz	
eezeg	eezeg	ɛuzzeg	ɛuzzeg	eezeg	ttɛuzzeg	
eezel	ezel	ɛzel	ɛzil	ezel	ttɛezal	
eezem	ezem	ɛzem	ɛzim	ezem	ttɛezam	
	creg	creg	crig	creg	cerreg	
	aggad	uggad	uggad	aggad	ttaggad	
	eggal	ggul	ggul	ggal	ttgalla	
	ħucc	ħucc	ħucc	ħucc	tthuccu	
	jxer	jxer	jxir	jxer	jexxer	
	ltef	ltef	ltif	ltef	lettef	
	nnay	nnuy	nnuy	nnay	ttnay	
	yacc	yucc	yucc	yacc	ttɣacc	
	rfed	rfed	rfid	rfed	reffed	
	sseg	sseg	sseg	sseg	seggay	
	sken	sken	skin	sken	skanay	
	ketti	ketta	ketta	ketti	tttekkay	
	sell	sell	sell	sell	sell	
	serfi	serfa	serfa	serfi	sserfay	
	sruh	sruh	sruh	sruh	sruhuy	
	suter	suter	suter	suter	ssutur	
	ɥill	ɥall	ɥall	ɥill	ɥallay	
	wwet	wwet	wwit	wwet	kkat	
	xaled	xuled	xuled	xaled	ttxalad	
	xtir	xtar	xtar	xtir	tttextiri	
	zger	zger	zgir	zger	zegger	

amyag aherfi deg Dallet	amyag aherfi deg burđ mira	imizri	imizri ibaw	urmir	ussid	anamek s tefransist
bubb	/	/	/	/	/	
bibb	/	/	/	/	/	
becc	becc	becc	becc	becc	tbeccic	
bedd	bedd	bedd	bedd	bedd	tbeddad	

ebded	bedd	bedd	bedd	bedd	tbaddad	
budd	budd	budd	budd	budd	tbuddu	
ebder	<u>b</u> der	<u>b</u> der	<u>b</u> dir	<u>b</u> der	<u>b</u> edder	
ebdeε	bdeε	bdeε	bdiε	bdeε	beddeε	
badeε	badeε	<u>b</u> adeε	<u>b</u> adeε	<u>b</u> adeε	<u>b</u> eddeε	
bađen	<u>b</u> ađen	<u>b</u> ađen	<u>b</u> ađen	<u>b</u> ađen	<u>b</u> atğan	
ebđer	/	/	/	/	/	
ebğes	bages	bages	bages	bages	begges	
ebhet	/	/	/	/	/	
bbah	/	/	/	/	/	
buħef	/	/	/	/	/	
ebħet	/	/	/	/	/	
ebjeh	/	/	/	/	/	
ebley	/	/	/	/	/	
ebleε	bleε	bleε	bliε	bleε	belleε	
ibnin	ibnin	<u>b</u> nin	<u>b</u> nin	<u>b</u> nin	<u>t</u> ibnin	
bbey	bbey	bbey	bbiy	bbey	tebbey	
eby ^w ed	by ^w ed	by ^w ed	by ^w id	by ^w ed	beyy ^w ed	
eby ^w el	by ^w el	by ^w el	by ^w il	by ^w el	beyy ^w el	
beqqi	beqqi	beqqi	beqqi	beqqi	tbeqqi	
bber	/	/	/	/	/	
berri	berri	berra	berra	berri	berri	
ebrec	/	/	/	/	/	
ebred	<u>b</u> red	<u>b</u> red	<u>b</u> rid	<u>b</u> red	<u>t</u> egrad	
ebred	/	/	/	/	/	
ebređ	bređ	bređ	briđ	bređ	berređ	
ebrek	brek	brek	brik	brek	berrek	
barek	barek	barek	barek	barek	tbarak	
ibrik	brik	brik	brik	brik	tebrik	
ebren	bren	bren	brin	bren	berren	
ebreq	/	/	/	/	/	
ebrex	/	/	/	/	/	
ebrez	brez	brez	briz	brez	berrez	
ebtel	btel	btel	btil	btel	bettel	
ebx ^w el	/	/	/	/	/	
ebx ^w eş	bx ^w eş	bx ^w eş	bx ^w iş	bx ^w eş	tbexx ^w iş	
ebbez	bbez	bbez	bbiz	bbez	tebbez	
ebzed	/	/	/	/	/	
ebzeg	bzeg	bzeg	blig	bzeg	bezzeg	
ebzer	/	/	/	/	/	
ebæed	bæed	bæed	bæid	bæed	tbaæid	
ebæet	/	/	/	/	/	
cebbi	/	/	/	/	/	
ecbeħ	cbeħ	cbeħ	cbiħ	cbeħ	cebbeħ	
ecbek	cbek	cbek	cbik	cbek	cebbek	
cabek	/	/	/	/	/	

ecbeε	/	/	/	/	/	
cudd	cudd	cudd	cudd	cudd	tcuddu	
cedhi	/	/	/	/	/	
ccēḏ	ccetḏ	ccetḏ	cciḏ	ccetḏ	tecceḏ	
ecḏef	/	/	/	/	/	
ecḏeh	cḏeh	cḏeh	cḏih	cḏeh	cetḏeh	
eccef	ccef	ccef	ccif	ccef	teccef	
cuff	cuff	cuff	cuff	cuff	tcuffu	
ecfeq	/	/	/	/	/	
ecfeε	cfeε	cfeε	cfie	cfeε	ceffeε	
cafeε	cafeε	cafeε	cafeε	cafeε	tcafaε	
ecceg	cceg	cceg	ccig	cceg	tecceg	
cihwi	/	/	/	/	/	
ççeh	/	/	/	/	/	
eçḏēḏ	/	/	/	/	/	
echen	chen	çhen	chin	çhen	ceḏhen	
cukk	cukk	cukk	cukk	cukk	tcukku	
cetki	cetki	cetki	cetka	cetki	tcetkay	
eclec	/	/	/	/	/	
eclex	clex	clex	clix	clex	cellex	
ecleε	/	/	/	/	/	
ecmet	cmet	cmet	cmit	cmet	cemmet	
ecmex	/	/	/	/	/	
ecneg	/	/	/	/	/	
ecneε	/	/	/	/	/	
ecy ^w eb/e cyeb	cy ^w eb	cy ^w eb	cy ^w ib	cy ^w eb	ceyy ^w eb	
ecy ^w el	cyel	cyel	cyil	cyel	ceyyel	
ceqq	/	/	/	/	/	
cuqq	cuqq	cuqq	cuqq	cuqq	tcuquu	
ččar	ččar	ččur	ččur	ččar	tččaray	
ecḏeb	/	/	/	/	/	
ecḏēḏ	creḏ	creḏ	cřiḏ	creḏ	cerreḏ	
ecḏeh	cḏeh	cḏeh	cḏih	cḏeh	ceḏḏeh	
ecrek	crek	crek	crik	crek	cerrek	
carek	carek	carek	carek	carek	tcarek	
ecḏem	/	/	/	/	/	
ecḏeq	/	/	/	/	/	
ecrew	/	/	/	/	/	
ecreε	/	/	/	/	/	
caḏeε	careε	careε	careε	careε	cerreε	
cetti	/	/	/	/	/	
ecḏen	cḏen	cḏen	cḏin	cḏen	ceḏḏen	
ecḏer	cḏer	cḏer	cḏir	cḏer	ceḏḏer	
ecwēḏ	cweḏ	cweḏ	cwiḏ	cweḏ	cewweḏ	
ciweḏ	cawer	cawer	cawer	cawer	tcawar	
ecxec	/	/	/	/	/	
ecxem/e	/	/	/	/	/	

cx ^w em						
ecx ^w eṛ	jx ^w eṛ	jx ^w eṛ	jx ^w iṛ	jx ^w eṛ	tejxar	
ccuci	/	/	/	/	/	
cayel	cayel	cayel	cayel	cayel	tcayal	
ecēef	cēef	cēef	cēif	cēef	cēēef	
ecēel	cēel	cēel	cēil	cēel	cēēel	
dbex	/	/	/	/	/	
dafeε	dafeε	dufeε	dufeε	dafeε	ddafae	
dheb	dheb	dheb	dhib	dheb	dehheb	
dhec	dhec	dhec	dhic	dhec	dehhec	
dhen	dhen	dhen	dhin	dhen	dehhen	
dukk	/	/	/	/	/	
dker	dker	dker	dkir	dker	dekker	
dull	/	/	/	/	/	
dleg	/	/	/	/	/	
ddem	ddem	ddem	ddim	ddem	taddam	
dden	dden	dden	ddin	dden	tedden	
edneb	/	/	/	/	/	
dnes	/	/	/	/	/	
dyel	dyel	dyel	dyil	dyel	deyyel	
duqq	/	/	/	/	/	
edder	dder	dder	ddir	dder	tedder	
edreg	/	/	/	/	/	
edrem	drem	drem	drim	drem	derrem	
dres	/	/	/	/	/	
ddari	dduri	dduri	ddur	dduri	tedduri	
dree	dree	dree	drie	dree	derree	
dwel	/	/	/	/	/	
dxem	/	/	/	/	/	
dyeq	dyeq	dyeq	dyiq	dyeq	tdeyyiq	
ddez	/	/	/	/	/	
ddei	ddei	ddeā	ddeā	ddēu	ddaεeu	
dæn	/	/	/	/	/	
ēdbex	ṭbex	ṭbex	ṭbix	ṭbex	ṭebbex	
ēbee	ṭbeε	ṭbeε	ṭbie	ṭbee	ṭebbee	
ḡudd	/	/	/	/	/	
ēdfeṛ	/	/	/	/	/	
ēdheṛ	dher	dher	dhir	dher	dēhher	
ḡill	ṭill	ṭall	ṭall	ṭill	ṭilliw	
ḡleb	ṭleb	ṭleb	ṭlib	ṭleb	ṭelleb	
ēḡleḡ	/	/	/	/	/	
ēḡlem	ṭlem	ṭlem	ṭlim	ṭlem	ṭallam	
ēḡles	/	/	/	/	/	
ḡumm	/	/	/	/	/	
ēḡmen	ṭmen	ṭmen	ṭmin	ṭmen	ṭemmin	
ḡurṛ	ṭurr	ṭurr	ṭurr	ṭurr	ṭurru	
ēḡreb	/	/	/	/	/	

drec	/	/	/	/	/	
dref	/	/	/	/	/	
edreg	/	/	/	/	/	
edreh	treh	treh	trih	treh	tarreh	
edres	/	/	/	/	/	
ettes	ttes	ttes	ttis	ttes	tettes	
dawee	tawae	tawae	tawee	tawae	tawwae	
deef	tæf	tæf	tæif	tæf	tæeif	
efcel	fcel	fcel	fcil	fcel	feccel	
efdeh	fdeh	fdeh	fđih	fdeh	feddeh	
efdel	/	/	/	/	/	
efder	fter	fter	ftir	fter	fetter	
effeg	/	/	/	/	/	
efhem	fhem	fhem	fhim	fhem	fehhem	
efhec	/	/	/	/	/	
efhem	fhem	fhem	fhim	fhem	fehhem	
efjeε	fjeε	fjeε	fjie	fjeε	fejjeε	
fakk	fukk	fukk	fukk	ffuk	tfakka	
efles	fles	fles	flis	fles	felles	
efneε	/	/	/	/	/	
effey	ffey	ffey	ffiy	ffey	teffey	
efqeε	fqeε	fqeε	fqie	fqeε	feqqeε	
efferr	ffer	ffer	ffir	ffer	teffer	
furr	/	/	/	/	/	
furř	furř	furř	furř	furř	tfurřu	
ifrir	/	/	/	/	/	
efrec	/	/	/	/	/	
efred	/	/	/	/	/	
efřed	/	/	/	/	/	
efreg	freg	freg	frig	freg	ferreg	entourer
efreh	freh	freh	frih	freh	ferreh	
efrek	/	/	/	/	/	
efren	fren	fren	frin	fren	ferren	
efrey	frey	frey	friy	frey	ferrey	
efreq	freq	freq	friq	freq	ferreq	
fareq	fareq	fureq	fureq	fareq	ferreq	
efres	fres	fres	fris	fres	ferres	
fareş	fareş	fures	fures	fares	tfaras	
frari	frari	frari	frari	frari	tefrarri	
efrez	frez	frez	friz	frez	ferrez	
efřez	fřez	fřez	fřiz	fřez	ferřez	
efsed	/	/	/	/	/	
efser	fser	fser	fsir	fser	fesser	
efsex	/	/	/	/	/	
efteh	fteh	fteh	ftih	fteh	fetteh	
eftek	/	/	/	/	/	
eftel	ftel	ftel	ftel	ftel	fettel	
eften	/	/	/	/	/	

efter	fter	fter	fțir	fter	fetter	
efțel	/	/	/	/	/	
efțen	/	/	/	/	/	
fuxx	/	/	/	/	/	
efxes	/	/	/	/	/	
effeț	ffeț	ffeț	ffiz	ffeț	teffeț	
efœel	/	/	/	/	/	
gaber	gaber	gaber	gabar	gabar	tgabbar	
egdel	/	/	/	/	/	
egdem	/	/	/	/	/	
eg ^w dem	/	/	/	/	/	
ggaj	ggaj	ggaj	ggaj	ggaj	tgajja	
ggaji	ggaji	ggaji	ggaji	ggaji	tgajji	
gell	/	/	/	/	/	
eglez	/	/	/	/	/	
eg ^w med	/	/	/	/	/	
egmer	/	/	/	/	/	
eg ^w mez	/	/	/	/	/	
ggani	/	/	/	/	/	
g ^w rec	krec	krec	kric	krec	tkarric	
gren	/	/	/	/	/	
egres	gres	gres	gris	gres	gerres	
gareœ	/	/	/	/	/	
gg ^w et	/	/	/	/	/	
egzem	gzem	gzem	gzim	gzem	gezzem	
egzer	gzer	gzer	gzir	gzer	gezzer	
hubb	/	/	/	/	/	
ehbej	/	/	/	/	/	
ehbel	hbel	hbel	hbil	hbel	hebbel	
ehder	/	/	/	/	/	
ehbet	/	/	/	/	/	
hucc	hucc	hucc	hucc	hucc	thuccu	
hudd	hudd	hudd	hudd	hudd	thuddu	
ehdef	/	/	/	/	/	
ehdem	/	/	/	/	/	
ehder	hder	hder	hdir	hder	hedder	
heggi	/	/	/	/	/	
hajer	hajer	hajer	hujer	hajer	thajjar	
ehlek	hlek	hlek	hlik	hlek	hellek	
humm	/	/	/	/	/	
ehmej	hmej	hmej	hmej	hmej	hemmej	
ehmel	hmel	hmel	hmil	hmel	hemmel	
henni	henni	henna	henna	henni	thenna	
herri	therri	therra	thara	therra	therra	
ehreb	hreb	hreb	hrib	hreb	herreb	
ihriw	/	/	/	/	/	
ehter	/	/	/	/	/	
huzz	huzz	huzz	huzz	huzz	thuzzu	

ehzel	/	/	/	/	/	
ehzem	/	/	/	/	/	
hibb	hibb	habb	habb	hibb	thibbi	
ehbek	hbek	hbek	hbik	hbek	hebbek	frotter
ehbel	/	/	/	/	/	
ehbeq	/	/	/	/	/	
ehbes	hbes	hbes	hbes	hbes	hebbes	
hbes	hbes	hbes	hbis	hbes	hebbes	
ehced	/	/	/	/	/	
ehcer	/	/	/	/	/	
ehdef	/	/	/	/	/	
ehdij	/	/	/	/	/	
ehdeq	/	/	/	/	/	
hader	hader	hader	huder	hader	thadar	
ehder	hder	hder	hdir	hder	hedder	
ehder	hder	hder	hdir	hder	hedder	
ehdem	htem	htem	htim	htem	hettem	
ehfed	hfet	hfet	hfit	hfet	heffet	
ehfer	/	/	/	/	/	
ehjeb	hjeb	hjeb	hjeb	hjeb	hejjeb	
hukk	hukk	hukk	hukk	hukk	thukku	
ehkem	hkem	hkem	hkim	hkem	hekkem	
ehker	/	/	/	/	/	
ehlel	hlel	hlel	hlil	hlel	hellel	
hull	/	/	/	/	/	
ehleb	/	/	/	/	/	
ehlef	hlel	hlel	hlif	hlel	hellef	
ehlij	/	/	/	/	/	
ehlem	/	/	/	/	/	
ehleq	/	/	/	/	/	
ihliw	/	/	/	/	/	
ehmed	hmed	hmed	hmid	hmed	hemmed	
ehmel	hmel	hmel	hmil	hmel	hemmel	
ehmeq	hmeq	hmeq	hmiq	hmeq	hemmeq	
ehmer	/	/	/	/	/	
ehmez	/	/	/	/	/	
hunn	hunn	hunn	hunn	hunn	thunnu	
ihnin	hnin	hnin	hnin	hnin	tihnin	
ehnet	/	/	/	/	/	
ehnew	/	/	/	/	/	
ehqer	hqer	hqer	hqir	hqer	heqquer	
her	/	/	/	/	/	
hareb	hareb	hareb	hareb	hareb	herreb	
hareb	/	/	/	/	/	
ehrec	hrec	hrec	hric	hrec	herrec	
ehreg	/	/	/	/	/	
ehrem	hrem	hrem	hrim	hrem	herrem	
ehren	/	/	/	/	/	

eḥreq	ḥreq	ḥreq	ḥriq	ḥreq	herreq	
eḥreş	/	/	/	/	/	
eḥret	/	/	/	/	/	
eḥrez	ḥrez	ḥrez	ḥrez	ḥrez	herrez	
ḥess	/	/	/	/	/	
ḥuss	ḥuss	ḥuss	ḥuss	ḥuss	tḥussu	
eḥseb	ḥseb	ḥseb	ḥsib	ḥseb	hesseb	
ḥaseb	ḥaseb	ḥaseb	ḥaseb	ḥaseb	tḥassab	
eḥsed	ḥsed	ḥsed	ḥsid	ḥsed	hessed	
ḥasef	/	/	/	/	/	
eḥsen	/	/	/	/	/	
eḥşel	ḥşel	ḥşel	ḥsil	ḥşel	hessel	
eḥtec	/	/	/	/	/	
eḥtil	/	/	/	/	/	
hiwec	hiwec	hawec	hawec	hawec	tḥawac	
eḥwij	hwaj	hwaj	hwaj	hwaj	tehwaj	
hiwel	/	/	/	/	/	
eḥweş	ḥweş	ḥweş	ḥwiş	ḥweş	tḥawaş	
hiwet	/	/	/	/	/	
seḍhi	seṭhi	seṭha	seṭha	seṭhi	tseṭhi	
eḥzem	ḥzem	ḥzem	ḥzim	ḥzem	hezzen	
ḥazem	/	/	/	/	/	
eḥzen	ḥzen	ḥzen	ḥzin	ḥzen	hezzen	
ejbed	jbed	jbed	jbid	jbed	jebbed	
ejber	/	/	/	/	/	
jadel	/	/	/	/	/	
ejder	/	/	/	/	/	
ejjed	/	/	/	/	/	
juff	/	/	/	/	/	
ejfel	/	/	/	/	/	
ejhed	jhed	jhed	jhid	jhed	jehhed	
ejhel	jhel	jhel	jhil	jhel	jehhel	
ejher	/	/	/	/	/	
ejlec	/	/	/	/	/	
ejlef	/	/	/	/	/	
ejleḥ	/	/	/	/	/	
ejleq	/	/	/	/	/	
ejjem	/	/	/	/	/	
ejmee	jmee	jmee	jmie	jmee	jemmee	
janeb	/	/	/	/	/	
ejneḥ	/	/	/	/	/	
janes	/	/	/	/	/	
ejnee	/	/	/	/	/	
ejy ^w em	jyem	jyem	jyim	jyem	jeyyem	
ejq ^w er	/	/	/	/	/	
jujri	/	/	/	/	/	
jerri	/	/	/	/	/	
ejred	/	/	/	/	/	

ejreḥ	jreḥ	jreḥ	jriḥ	jreḥ	jerreḥ	
ejrem	/	/	/	/	/	
ḵaweb	jaweb	jaweb	jaweb	jaweb	tjawwab	
ejweḵ	zweḵ	zweḵ	zwiḵ	zweḵ	zewweḵ	
ejjex	/	/	/	/	/	
ejæḥ	/	/	/	/	/	
ḵubb	/	/	/	/	/	
kubb	/	/	/	/	/	
ek ^w bel	kbel	kbel	kbil	kbel	kebbel	
kaber	/	/	/	/	/	
ekcef	kcef	kcef	kcif	kcef	keccef	
ekcem	kcem	kcem	kcim	kcem	keccem	
ekfel	kfel	kfel	kfil	kfel	keffel	
ek ^w feḥ	kfer	kfer	kfir	kfer	keffre	
eḵḥes	/	/	/	/	/	
ekmec	kmec	kmec	kmic	kmec	kemmec	
ek ^w med	/	/	/	/	/	
eḵmel	kmel	kmel	kmil	kmel	kemmel	
ekmen	/	/	/	/	/	
ek ^w mer	/	/	/	/	/	
ekmes	kmes	kmes	kmis	kmes	kemmes	
ekmez	kmez	kmez	kmiz	kmez	kemmez	
eknef	knef	knef	knif	knef	kennef	
ikniw	ikniw	knaw	kniw	knew	kennew	
ekker	kker	kker	kkir	kker	tekkar	
ḵurḥ	/	/	/	/	/	
ekḥeḍ	kreḥ	kreḥ	kriḥ	kreḥ	kerreḥ	
ekref	kref	kref	krif	kref	kerref	
ek ^w ref	/	/	/	/	/	
ekḥeh	ḵḥeh	ḵḥeh	ḵḥih	ḵḥeh	keḥḥeh	
eḵḥrem	ḵḥrem	ḵḥrem	ḵḥrim	ḵḥrem	kerḥrem	
ekres	kres	kres	kris	kres	kerres	
ekrez	kreḥ	kreḥ	kriz	kreḥ	kerrez	
ekkes	kkes	kkes	kkis	kkes	tekkes	
ekseb	kseb	kseb	ksib	kseb	kesseb	
iksin	/	/	/	/	/	
ekteb	kteb	kteb	ktib	kteb	ketteb	
ek ^w tef	/	/	/	/	/	
kkaw	kkaw	kkaw	kkaw	kkaw	kkaw	
ektil	ktal	ktal	ktal	ktal	tektal	
ekyes	/	/	/	/	/	
eḵḵeeb	ḵḵeeb	ḵḵeeb	ḵḵeib	ḵḵeeb	ḵḵeeḵeeb	
eḵḵeec	ḵḵeec	ḵḵeec	ḵḵeic	ḵḵeec	kuḵḵeec	
eḵḵeer	/	/	/	/	/	
elled	/	/	/	/	/	
ellef	ltef	ltef	ltif	ltef	lettef	
elfey	lfey	lfey	lfiy	lfey	leffey	

elfez	ffez	ffez	ffiz	ffez	teffez	
elhet	lhet	lhet	lhit	lhet	lehhet	
elhem	/	/	/	/	/	
elheq	lheq	lheq	lhiq	lheq	leḥheq	
ellem	llem	llem	llim	llem	tellem	
lumm	lumm	lumm	lumm	lumm	tlummu	
elmed	lmed	lmed	lmid	lmed	lemmed	
elmej	/	/	/	/	/	
elley	/	/	/	/	/	
ely ^w et	/	/	/	/	/	
ilqiq	/	/	/	/	/	
elqec	/	/	/	/	/	
elq ^w eḍ	lqeṭ	lqeṭ	lqiṭ	lqeṭ	leqqeṭ	
elqef	/	/	/	/	/	
elles	/	/	/	/	/	
elseq	lseq	lseq	lsiq	lseq	lesseq	
elteḥ	/	/	/	/	/	
latem	/	/	/	/	/	
eltex	/	/	/	/	/	
elteç	/	/	/	/	/	
eltef	ltef	ltef	ltif	ltef	lettef	
ilwiḡ	/	/	/	/	/	
ellex	/	/	/	/	/	
elxes	/	/	/	/	/	
elxez	/	/	/	/	/	
ellez	llez	llez	lliz	llez	tellez	
ellaz	lluz	llaz	lluz	lluz	tlaza	
elzem	lzem	lzem	lzim	lzem	lezzem	
elxeb	lxeb	lxeb	leib	lxeb	lexeb	
emced	mceṭ	mceṭ	mciṭ	mceṭ	meccet	
emceḥ	/	/	/	/	/	
emcek	/	/	/	/	/	
mudd	/	/	/	/	/	
emdel	mdel	mdel	mdil	mdel	meddel	
emger	mger	mger	mgir	mger	megger	
emḥen	mḥen	mḥen	mḥin	mḥen	mehḥen	
emḥeq	mḥeq	mḥeq	mḥiq	mḥeq	mehḥeq	
emḥeṣ	/	/	/	/	/	
emken	/	/	/	/	/	
mmel	/	/	/	/	/	
emleḥ	mleḥ	mleḥ	mlih	mleḥ	melleḥ	
emlek	mlek	mlek	mlik	mlek	mellek	
emleq	mleq	mleq	mliq	mleq	melleq	
menni	menni	menna	menna	menni	tmenni	
emnee	mnee	mnee	mnie	mnee	mennee	
emmey	/	/	/	/	/	
muqel	muqel	muqel	muqel	muqel	tmuqqul	
emred	/	/	/	/	/	

emred	/	/	/	/	/	
emrej	/	/	/	/	/	
emres	/	/	/	/	/	
emret	/	/	/	/	/	
emsed	msed	msed	msid	msed	temsad	
emseh	mseh	mseh	msih	mseh	messeh	
emsel	msel	msel	msil	msel	messel	
emsex	msex	msex	msix	msex	messex	
emşed	/	/	/	/	/	
emmet	mmet	mmut	mmut	mmet	tmettat	
matel	/	/	/	/	/	
emzel	mzel	mzel	mzil	mzel	mezzel	
emæen	mæen	mæen	mæin	mæen	meæeen	
enbec	/	/	/	/	/	
enbet	/	/	/	/	/	
enced	/	/	/	/	/	
encef	/	/	/	/	/	
encel	ncel	ncel	ncil	ncel	neccel	
encer	/	/	/	/	/	
encew	ncew	ncew	nciw	ncew	neccew	
endef	/	/	/	/	/	
endeh	/	/	/	/	/	
endem	ndem	ndem	ndim	ndem	neddem	
ender	/	/	/	/	/	
ender	/	/	/	/	/	
enneđ	/	/	/	/	/	
enfed	nfet	nfet	nfit	nfet	neffet	
enfeg	/	/	/	/	/	
enfeh	nfeh	nfeh	nfiḥ	nfeh	neffeh	
enfel	/	/	/	/	/	
enfeq	/	/	/	/	/	
enfer	/	/	/	/	/	
enfes	nfes	nfes	nfis	nfes	tneffis	
enfex	/	/	/	/	/	
enfez	/	/	/	/	/	
enfeε	nfeε	nfeε	nfiε	nfeε	neffεε	
enḡeb	ngeb	ngeb	ngib	ngeb	neggeb	
eng ^w ed	/	/	/	/	/	
engef	ngef	ngef	ngif	ngef	neggef	
enḡeh	/	/	/	/	/	
eng ^w eh	/	/	/	/	/	
enger	/	/	/	/	/	
naḡes	/	/	/	/	/	
ngugi	/	/	/	/	/	
enhel	/	/	/	/	/	
enheq	nheq	nheq	nhiq	nheq	nehheq	
enher	nher	nher	nhir	nher	nehher	
enhet	nhet	nhet	nhit	nhet	nehhet	

enḥel	/	/	/	/	/	
enḥes	nḥes	nḥes	nḥis	nḥes	neḥḥes	
enjem/e njem	njem	njem	njim	njem	nejjem	
enjer	njer	njer	njir	njer	nejjer	
enjeε	njeε	njeε	njie	njeε	nejjeε	
enḳeb	/	/	/	/	/	
enḳer	nker	nker	nkir	nker	nekker	
enḳez	/	/	/	/	/	
nnal	/	/	/	/	/	
nnam	nnam	nnum	nnum	nnam	tnnam	
namer	/	/	/	/	/	
enyeb	/	/	/	/	/	
enyec /enqec	nqec	nqec	nqic	nqec	neqqec	
eny ^w ec	/	/	/	/	/	
enyed / enqed	/	/	/	/	/	
enyed	/	/	/	/	/	
eny ^w ej	/	/	/	/	/	
enyel	/	/	/	/	/	
enyer / enqer	nqer	nqer	nqir	nqer	neqqar	
enyēs / enqēs	nqēs	nseq	nqis	nqēs	neqqēs	
neqqi	/	/	/	/	/	
enqeb	nqeb	nqeb	nqib	nqeb	neqqeb	
enqec	nqec	nqec	nqic	nqec	neqqec	
enqed	/	/	/	/	/	
enq ^w ej	/	/	/	/	/	
enqer	/	/	/	/	/	
naqer	/	/	/	/	/	
enqēs	nqēs	nqēs	nqis	nqēs	neqqēs	
enqēε enqāε	/	/	/	/	/	
enseb	/	/	/	/	/	
enser	nser	nser	nsir	nser	nesser	
ensex	/	/	/	/	/	
enṣeb	/	/	/	/	/	
enṣef	/	/	/	/	/	
enṣeḥ	/	/	/	/	/	
enṣel	nṣel	nṣel	nṣil	nṣel	neṣṣel	
enṣer	/	/	/	/	/	
entab	/	/	/	/	/	
enteg	/	/	/	/	/	
entel	/	/	/	/	/	
entam	/	/	/	/	/	
enṭed	nṭeṭ	nṭeṭ	nṭiṭ	nṭeṭ	neṭṭeṭ	

enṭeg	/	/	/	/	/	
enṭeh	/	/	/	/	/	
inṭih	/	/	/	/	/	
enṭel	nṭel	nṭel	nṭil	nṭel	neṭṭel	
enṭeq	nṭeq	nṭeq	nṭiq	nṭeq	neṭṭeq	
enṭer	nṭer	nṭer	nṭir	nṭer	neṭṭer	
enṭez	/	/	/	/	/	
enṭæ	nṭæ	nṭæ	nṭie	nṭee	neṭṭee	
niwel	nawel	nawel	nawel	nawel	tnawal	
enxel	/	/	/	/	/	
enxem	nxem	nxem	nxim	nxem	nexxem	
enxeṛ	/	/	/	/	/	
enzef	nzef	nzef	nzif	nzef	nezzef	
enzel	/	/	/	/	/	
enzer	nser	nser	nsir	nser	nesser	
enzeṛ	/	/	/	/	/	
nazeε	nazeε	nazeε	nazeε	nazeε	tnazzeε	
neel	neel	neel	neil	neel	neεeel	
enεem	/	/	/	/	/	
næeṛ	næeṛ	næeṛ	næiṛ	næeṛ	næaṛ	
neet	/	/	/	/	/	
enzef	nzef	nzef	nzif	nzef	tenzaf	
yebbi	/	/	/	/	/	
ey ^w bel	ybel	ybel	ybil	ybel	yebbel	
ey ^w ben	yben	yben	ybin	yben	yebben	
eyber	yber	yber	ybir	yber	yebber	
yucc	/	/	/	/	/	
eyder	yder	yder	ydir	yder	yedder	
eydeb	/	/	/	/	/	
eydel	/	/	/	/	/	
eydeş	ytes	ytes	ytis	ytes	yettes	
eyfel	yfel	yfel	yfil	yfel	yeffel	
ey ^w fer	/	/	/	/	/	
yafer	yafer	yufer	yufer	yafer	tyafar	
yull	yull	yull	yull	yull	tyullu	
qq ^w el	qqel	qqel	qqil	qqel	teqqal	
eyleb	yleb	yleb	ylib	yleb	yelleb	
eyled	ylet	ylet	yliṭ	ylet	yellet	
ey ^w lef	ylef	ylef	yliy	ylef	teylaf	
eyleq	yleq	yleq	yliq	yleq	yelleq	
yumm	yumm	yumm	yumm	yumm	tyummu	
qqim	qqim	qqim	qqim	qqim	tyimma	
eymed	ymet	ymet	ymit	ymet	yemmet	
eymel	ymel	ymel	ymil	ymel	yemmel	
eymeq	εmeq	εmeq	εmiq	εmeq	εemmeq	
eymes	/	/	/	/	/	
eymez	ymez	ymez	ymiz	ymez	yemmez	
yenni	yenni	yenna	yenna	yenni	tyenni	

yunfu	yunfu	yunfa	yunfu	yunfu	tyunfu	
yunzu	/	/	/	/	/	
eyret	/	/	/	/	/	
yurř	/	/	/	/	/	
qqar	qqar	qqur	qqur	qqar	tyarra	
yerri	/	/	/	/	/	
eyrec	/	/	/	/	/	
eyrem	yrem	yrem	yrim	yrem	teyram	
eyreq	/	/	/	/	/	
eyres	/	/	/	/	/	
eyrez	/	/	/	/	/	
eysel	/	/	/	/	/	
eyseb	/	/	/	/	/	
yutt	/	/	/	/	/	
y ^w ett	yetti	yetta	yetta	yetti	tyetti	
eydes	ytes	ytes	ytis	ytes	yettes	
eywed	/	/	/	/	/	
yiwel	/	/	/	/	/	
iywis	/	/	/	/	/	
eyyer	/	/	/	/	/	
yezz	yezz	yezza	yezza	yezz	yezaz	
iy ^w zif	yzif	yezgif	yzif	yzif	yezgef	
eyzel/ ey ^w zel	/	/	/	/	/	
eqbec	/	/	/	/	/	
eqbeđ / eq ^w beđ	/	/	/	/	/	
eqbeḥ	qbeḥ	qbeḥ	qbih	qbeḥ	qebbeḥ	
eqbel	qbel	qbel	qbil	qbel	qebbel	
eqber/eq ^w ber	/	/	/	/	/	
qqac	/	/	/	/	/	
qucc	/	/	/	/	/	
eqcer/eq ^w cer	qcer	qcer	qcir	qcer	teqcar	
eqceε	/	/	/	/	/	
qqed	/	/	/	/	/	
qadd	/	/	/	/	/	
eqdec	qdec	qdec	qeddec	qdec	qeddec	
eqdef	qdef	qdef	qdif	qdef	qeddef	
eqdeḥ	/	/	/	/	/	
eqdem	qdem	qdem	qdim	qdem	qeddem	
qadem	/	/	/	/	/	
qader	qader	qader	qader	qader	taqadar	
eqdew	/	/	/	/	/	
eqdeb	/	/	/	/	/	
eqdeε	qteε	qteε	qtie	qteε	qettaε	
eqteε	/	/	/	/	/	

qadee	/	/	/	/	/	
eqfel	qfel	qfel	qfil	qfel	qeffel	
eqfer	/	/	/	/	/	
eqfufi	/	/	/	/	/	
eqfez	qfez	qfez	qfiz	qfez	qeffez	
eqher	/	/	/	/	/	
eq ^w jej	/	/	/	/	/	
iqlil	qlil	qlil	qlil	qlil	teqlil	
eqleb	qleb	qleb	qlib	qleb	teqlab	
eq ^w lec	/	/	/	/	/	
eq ^w lem	/	/	/	/	/	
eqleq	qleq	qleq	qleq	qleq	tqelliq	
eqlee	qlee	qlee	qlie	qlee	qellee	
qqim	qqim	qqim	qqim	qqim	tyima	
eqmec	qmec	qmec	qmic	qmec	qemmec	
eqmed	qmet	qmet	qmit	qmet	qemmet	
eqmeh	/	/	/	/	/	
eqmer	/	/	/	/	/	
eqqen	qqen	qqen	qqin	qqen	teqqen	
eqnee	qnee	qnee	qnie	qqnee	qennee	
qirr	/	/	/	/	/	
eqreb	qreb	qreb	qrib	qreb	qerreb	
eq ^w rec	q ^w rec	q ^w rec	q ^w ric	q ^w rec	q ^w errec	
eqred	qret	qret	qrit	qret	qerret	
eqreh	qreh	qreh	qrih	qreh	tqerrih	
iqrih	/	/	/	/	/	
eq ^w rem	/	/	/	/	/	
eqren	/	/	/	/	/	
eq ^w res	/	/	/	/	/	
eqres	qers	qers	qers	qers	teyras	
qaree	qaree	qaree	qaree	qaree	tqaree	
eqqes	qqes	qqes	qqis	qqes	teqqes	
qass	/	/	/	/	/	
qiss	qiss	qass	qass	qiss	tqissi	
eqsed	qsed	qsed	qsid	qsed	qessed	
eqsef	qsef	qsef	qsif	qsef	qessef	
eqseh	qseh	qseh	qsih	qseh	qesseh	
eqsem	qsem	qsem	qsim	qsem	teqsam	
eq ^w sem	/	/	/	/	/	
eqtel	/	/	/	/	/	
qetti	/	/	/	/	/	
qewwi	/	/	/	/	/	
qebb ^w i	/	/	/	/	/	
eqwed	/	/	/	/	/	
eqyes	/	/	/	/	/	
qazem	/	/	/	/	/	
eqeed	qeed	qeed	qeid	qeed	qeeed	
iqeid	/	/	/	/	/	

reb̄bi	reb̄bi	rebba	rebba	reb̄bi	trebbi	
er̄beḡ	/	/	/	/	/	
er̄beḥ	rbeḥ	rbeḥ	rbiḥ	rbeḥ	rebbeḥ	
rabeε/ra weε	rabeε	rabeε	rabeε	rabeε	trabeε	
rucc	/	/	/	/	/	
eṛced	/	/	/	/	/	
eṛceḥ	/	/	/	/	/	
ercel	rcel	rcel	rcil	rcel	recel	
eṛcem	rcem	rcem	rcim	rcem	reccem	
eṛcex	/	/	/	/	/	
eṛdeḥ	/	/	/	/	/	
erdem	/	/	/	/	/	
eṛdem	/	/	/	/	/	
eṛdex	/	/	/	/	/	
eṛdeb	rṛeb	rṛeb	rṛib	rṛeb	reṛteb	
eṛdel	rṛel	rṛel	rṛil	rṛel	reṛtel	
er̄fed	rfed	rfed	rfid	rfed	reffed	
er̄fen	/	/	/	/	/	
eṛfeq	/	/	/	/	/	
rafeq	/	/	/	/	/	
er̄fes	/	/	/	/	/	
eṛfeε	/	/	/	/	/	
er̄ḡel	/	/	/	/	/	
er̄ḡem	/	/	/	/	/	
er̄ḡen	/	/	/	/	/	
eṛheb	/	/	/	/	/	
eṛhed	/	/	/	/	/	
eṛhef	ṛxef	ṛxef	ṛxif	ṛxef	ṛexxef	
eṛheḯ	/	/	/	/	/	
er̄hem	rhem	rhem	rhim	rhem	rehhem	
eṛhen	/	/	/	/	/	
eṛheb	rḥeb	rḥeb	rḥib	rḥeb	reḥḥeb	
eṛhel	rḥel	rḥel	rḥil	rḥel	reḥḥel	
eṛhem	rḥem	rḥem	rḥim	rḥem	reḥḥem	
eṛjeḥ	/	/	/	/	/	
eṛjem	/	/	/	/	/	
er̄jen	/	/	/	/	/	
eṛjeq	/	/	/	/	/	
eṛjee	/	/	/	/	/	
er̄keb	rkeb	rkeb	rkib	rkeb	rekkeb	
er̄kec / er̄k ^w ec	/	/	/	/	/	
er̄ked	/	/	/	/	/	
eṛkeḍ	/	/	/	/	/	
eṛkeḥ	/	/	/	/	/	
er̄kem	rkem	rkem	rkim	rkem	rekkem	
eṛken	/	/	/	/	/	

erk ^w es	/	/	/	/	/	
erkes	/	/	/	/	/	
erkez	/	/	/	/	/	
erkeε	/	/	/	/	/	
ermec	/	/	/	/	/	
ermed	/	/	/	/	/	
ermeg	/	/	/	/	/	
ermej	/	/	/	/	/	
ermel	/	/	/	/	/	
ermeq	/	/	/	/	/	
ermez	/	/	/	/	/	
ermez	yme ^z	yme ^z	ymiz	yme ^z	teymaz	
erγeb	/	/	/	/	/	
erγ ^w el	/	/	/	/	/	
irriq	/	/	/	/	/	
erqem	/	/	/	/	/	
erqes	/	/	/	/	/	
erşed	/	/	/	/	/	
ersel	/	/	/	/	/	
erşel/ erşel	/	/	/	/	/	
erşem	/	/	/	/	/	
ertek	/	/	/	/	/	
ertem	/	/	/	/	/	
erwel	rwel	rwel	rwil	rwel	regg ^w el	
erxef	rxef	rxef	rxif	rxef	rex ^w ef	
erx ^w em	/	/	/	/	/	
erxes	rxes	rxes	rxis	rxes	rex ^w es	
irxis	irxis	rxes	rxis	irxis	rex ^w eş	
erth	rth	rteş	rth	rth	retteş	
errez	irrez	irrez	irriz	irrez	truz	
erzef	rzef	rzef	rzif	rzef	rezzef	
irzig	rzig	rzag	rzig	rzig	rezzeg	
erzen	rzen	rzen	rzin	rrzen	rezzen	
erzeq	rzeq	rzeq	rziq	rzeq	rezzeq	
eræec	ræec	ræec	ræic	ræec	rææec	
eræed	ræed	ræed	ræid	ræed	rææed	
sibb	sibb	sabb	sabb	sibb	tsibbi	
esbed	/	/	/	/	/	
esbek	/	/	/	/	/	
esbey	sbey	sbey	sbiy	sbey	sebbey	
esbeq	/	/	/	/	/	
essed	/	/	/	/	/	
esdeq	/	/	/	/	/	
sedhi	sethi	setha	setha	sethi	tsethi	
esfef	/	/	/	/	/	
susef	susef	susef	susef	susef	tsussuf	
esfed	sfet	sfet	sfit	sfet	seffet	

esfeh	/	/	/	/	/	
esg ^w ed	/	/	/	/	/	
eshel	shel	shel	shil	shel	sehhel	
sahel	sahel	sahel	sahel	sahel	tsahal	
eshen	/	/	/	/	/	
esheq	/	/	/	/	/	
s _k ed	/	/	/	/	/	
es _k ef	skef	skef	skif	skef	sekkef	
es _k eṛ	skeṛ	skeṛ	skir	skeṛ	sekkeṛ	
es _k er	sker	sker	skir	sker	sekkaray	
eş ^w er	ş ^w er	ş ^w er	ş ^w ir	ş ^w er	tşekk ^w ir	
esleb	sleb	sleb	slib	sleb	selleb	
eslek	/	/	/	/	/	
salek	salek	salek	salek	salek	tsalek	
eslem	slem	slem	slim	slem	sellem	
salem	/	/	/	/	/	
esley	sley	sley	sliy	sley	selley	
eslex	slex	slex	slix	slex	tsellex	
summ	summ	summ	summ	summ	tsummu	
semmi	semmi	semma	semma	semmi	tsemmi	
esmed	/	/	/	/	/	
esmee	/	/	/	/	/	
issin	issin	ssen	ssin	ssin	tissin	
esyel	/	/	/	/	/	
seqqi	seqqi	seqqa	seqqa	seqqi	tseqqi	
s _q eḍ	/	/	/	/	/	
esser	s _ṣ er	s _ṣ er	s _ṣ ir	s _ṣ er	setter	
isrir	/	/	/	/	/	
serbi	serbi	serba	serba	serbi	tserbi	
esred	/	/	/	/	/	
esref	/	/	/	/	/	
esrem	/	/	/	/	/	
eswed	swed	swed	swid	swed	teswad	
esxeb	/	/	/	/	/	
esxec	/	/	/	/	/	
esxeḍ	sxeṭ	sxeṭ	sxiṭ	sxeṭ	sexxeṭ	
esxeṛ	/	/	/	/	/	
seyyi	/	/	/	/	/	
sayes	sayes	sayes	sayes	sayes	tsayas	
eseed	/	/	/	/	/	
saæf	/	/	/	/	/	
şubb	/	/	/	/	/	
esbeḍ	/	/	/	/	/	
eşbeḥ	/	/	/	/	/	
eşşed	sseṭ	sseṭ	ssiṭ	sseṭ	tesset	
eşşef	/	/	/	/	/	
şedḥi	setḥi	setḥa	setḥa	setḥi	tsetḥ	
şeffi	seffi	seffa	seffa	seffi	tseffi	

eşfeh	/	/	/	/	/	
eşfen	/	/	/	/	/	
şofer	şofer	şofer	şofer	şofer	tşofer	
şehhi	/	/	/	/	/	
şahab	/	/	/	/	/	
eşleb	/	/	/	/	/	
eşleḥ	/	/	/	/	/	
eşneb	/	/	/	/	/	
eşnee	şnee	şnee	şnie	şnee	şennee	
eşree	şree	şree	şrie	şree	şerree	
eşweb	şweb	şweb	şwib	şweb	teşwab	
eşyed	/	/	/	/	/	
eşseb	/	/	/	/	/	
etbet	tbet	tbet	tbit	tbet	tebbet	
etbee	tbee	tbee	tbie	tbee	tabbae	
ethef	thef	thef	thif	thef	teḥhef	
eṭṭel	ttel	ttel	ttil	ttel	tettel	
etlef	tlef	tlef	tlif	tlef	tellef	
etmer	/	/	/	/	/	
etqel	/	/	/	/	/	
êtrek	/	/	/	/	/	
etrek	/	/	/	/	/	
etwel	/	/	/	/	/	
etwer	/	/	/	/	/	
eḍbee	tbee	tbee	tbie	tbee	tebbec	
eṭṭed	ṭṭeṭ	ṭṭeṭ	ṭṭiṭ	ṭṭeṭ	teṭṭeṭ	
eṭṭef	ṭṭef	ṭṭef	ṭṭif	ṭṭef	tattaf	
ṭṭah	ṭṭah	ṭṭah	ṭṭah	ṭṭah	teṭṭah	
eḍleb	ṭleb	ṭleb	ṭlib	ṭleb	ṭallab	
eḍleq	/	/	/	/	/	
eṭlee	ṭlee	ṭlee	ṭlie	ṭlee	ṭellee	
eḍmee	ṭmee	ṭmee	ṭmie	ṭmee	ṭemmee	
eḍreh	/	/	/	/	/	
ṭṭes	ṭṭeş	ṭṭeş	ṭṭiş	ṭṭeş	teṭṭeş	
ṭṭee	/	/	/	/	/	
ṭṭen	/	/	/	/	/	
ḍaen	/	/	/	/	/	
weddi	/	/	/	/	/	
ewdec	/	/	/	/	/	
ewdee	/	/	/	/	/	
wadee	/	/	/	/	/	
weffi	/	/	/	/	/	
wafeq	/	/	/	/	/	
ewḡef	/	/	/	/	/	
wehhi	wehhi	wehha	wha	wehhi	twehhi	
ewheb	/	/	/	/	/	
ewhem	whem	whem	whim	whem	wehhem	
wehḥi	/	/	/	/	/	

ewḥec	/	/	/	/	/	
awḥed	wḥed	wḥed	wḥid	wḥed	wehḥed	
ewḥel	wḥel	wḥel	wḥil	wḥel	wehḥel	
ewḥeb	wḥeb	wḥeb	wḥib	wḥeb	wejḥeb	
wajeb	wajeb	wajeb	wajeb	wajeb	twajab	
ewḥjed	wḥjed	wḥjed	wḥjid	wḥjed	tewwjad	
wajeh	wajeh	wajeh	wajeh	wajeh	twajah	
ewjee	/	/	/	/	/	
wekki	/	/	/	/	/	
welli	welli	wella	wella	welli	twelli	
walef	/	/	/	/	/	
walem	/	/	/	/	/	
ewles	/	/	/	/	/	
wanes	wanes	wanes	wanes	wanes	twanas	
ewqem	/	/	/	/	/	
ewqet	/	/	/	/	/	
ewqee	/	/	/	/	/	
werri	/	/	/	/	/	
iwriy	iwriy	wrey	wriy	wriy	tiwwriy	
ewḥret	wḥret	wḥret	wḥrit	wḥret	weḥret	
ewsem	wsem	wsem	wsim	wsem	wessem	
ewseq	/	/	/	/	/	
ewsex	wsex	wsex	wsix	wsex	wessex	
ewsee	wsee	wsee	wsie	wsee	wessie	
iwsie	/	/	/	/	/	
wesḥsi	wesḥsi	wesḥsa	wesḥsa	wesḥsi	twesḥsi	
ewḥsef	wḥsef	wḥsef	wḥsif	wḥsef	tewwḥsaf	
ewḥsel	wḥsel	wḥsel	wḥsil	wḥsel	tewwḥsal	
wetḥti	/	/	/	/	/	
ewxed	wxed	wxed	wxid	wxed		
ewxem	/	/	/	/	/	
ewzen	wzen	wzen	wzin	wzen	wezen	
ewzee	wzee	wzee	wzie	wzee	wezzee	
ewweed	wweed	wweed	wweid	wweed	weeeed	
ewweḥr	wweḥr	wweḥr	wweḥr	wweḥr	weeeeḥr	
iweḥr	/	/	/	/	/	
exbec	xbec	xbec	xbic	xbec	xebbec	
exbed	xbet	xbet	xbiḥ	xbet	xebbet	
exbet	xbet	xbet	xbit	xbet	xebbet	
xxuc	xxuc	xxuc	xxuc	xxuc	xxuc	
excen	xcen	xcen	xcin	xcen	xeccen	
eḥxed	/	/	/	/	/	
exdem	xdem	xdem	xdim	xdem	xeddem	
exdee	xdee	xdee	xdie	xdee	xeddee	
exḥdeb	xḥdeb	xḥdeb	xḥtib	xḥdeb	xetḥdeb	
exḥdef	xḥdef	xḥdef	xḥtif	xḥdef	xetḥdef	
xeffi	xeffi	xfa	xfi	xfi	txeffi	
ixfif	ixfif	xfif	xfif	xfif	texfif	

xelli	/	/	/	/	/	
exleđ	xleť	xleť	xliť	xleť	xelleť	
exlef	xlef	xlef	xlif	xlef	txellif	
exleq	xleq	xleq	xliq	xleq	xelleq	
exleş	xleş	xleş	xliš	xleş	txelliş	
ex ^w lee	xlee	xlee	xlie	xlee	xellee	
ex ^w mej	xmej	xmej	xmij	xmej	xemmej	
ex ^w meř	xmeř	xmeř	xmir	xmeř	xemmer	
exneq	xneq	xneq	xniq	xneq	xenneq	
exnez	xnez	xnez	xniz	xnez	xennez	
exřeb	xřeb	xřeb	xřib	xřeb	xerřeb	
ex ^w řed	/	/	/	/	/	
ex ^w řef	x ^w řef	x ^w řef	x ^w řif	x ^w řef	x ^w erřef	
exřem	/	/	/	/	/	
exřeq	/	/	/	/	/	
exřez	/	/	/	/	/	
exsef	/	/	/	/	/	
exseř	xseř	xseř	xşir	xseř	xesşer	
exşem	/	/	/	/	/	
xaşş	xuşş	xuşş	xuşş	xaşş	txaşş	
xtem	xtem	xtem	xtim	xtem	xettem	
xten	xten	xten	xtin	xten	xetten	
xtiř	xřar	xřar	xřar	xřar	texřar	
xetři	xetři	xřa	xřa	xři	xetři	
xayel	xayel	xayel	xayel	xayel	txayal	
xzem	/	/	/	/	/	
xzen	xzen	xzen	xzin	xzen	xezzen	
xzeř	xzeř	xzeř	xziř	xzeř	xezzeř	
zřiz	/	/	/	/	/	
ezber / ezber	/	/	/	/	/	
izdig	izdig	zeddig	zeddig	izdig	zeddeg	
ezdeh	/	/	/	/	/	
ezdel	zdel	zdel	zdil	zdel	zeddel	
ezdem	zdem	zdem	zdim	zdem	zeddem	
ezdem	zdem	zdem	zdim	zdem	zeddem	
ezdey	zdey	zdey	zdiy	zdey	zeddey	
ezdeh	/	/	/	/	/	
ezzeř	/	/	/	/	/	
zuff	/	/	/	/	/	
ezzeř	/	/	/	/	/	
ezzeg	zzeg	zzeg	zzig	zzeg	tezzeg	
zeggi	/	/	/	/	/	
ezgel	zgel	zgel	zgel	zgel	zeggel	
ezgen	zgen	zgen	zgin	zgen	zeggen	
ezger	zger	zger	zgir	zger	zegger	
ezheř	zheř	zheř	zhif	zheř	zehheř	
ezher	/	/	/	/	/	

ezhed	/	/	/	/	/	
ezhel	/	/	/	/	/	
ezkem	/	/	/	/	/	
ezzel	/	/	/	/	/	
azzel	/	/	/	/	/	
ezled	/	/	/	/	/	
ezlef	/	/	/	/	/	
ezleg	/	/	/	/	/	
ezlem	/	/	/	/	/	
ezleq	/	/	/	/	/	
ezlet	/	/	/	/	/	
ezlez	zlez	zlez	zliz	zlez	zellez	
ezzem	zzem	zzem	zzim	zzem	tazzam	
ezzem	/	/	/	/	/	
ezmed	/	/	/	/	/	
ezmek	/	/	/	/	/	
ezmer	zmer	zmer	zmir	zmer	zemmer	
zuzen	/	/	/	/	/	
ezyeb	/	/	/	/	/	
ezyel	/	/	/	/	/	
ezqef	zqef	zqef	zqif	zqef	zeqqef	
ezqem	/	/	/	/	/	
ezzer	/	/	/	/	/	
ezreb	zreb	zreb	zrib	zreb	zerrib	
ezreq	/	/	/	/	/	
ezree	zree	zree	zree	zree	tzerrie	
ezwec	/	/	/	/	/	
ezwej	zwej	zwej	zwijs	zwej	zeggej	
ezwel	/	/	/	/	/	
ezwey	zwey	zwey	zwijs	zwey	tezwijs	
izwijs	/	/	/	/	/	
ezwer	zwer	zwer	zwijs	zwer	zewwer	
zwir	zwir	zwar	zwar	zwir		
zuxx	zuxx	zuxx	zuxx	zuxx	tzuxxu	
ezyen	zyen	zyen	zyin	zyen	tzeyyin	
izyin	/	/	/	/	/	
ezzee	/	/	/	/	/	
ezeed	/	/	/	/	/	
ezeef	zeef	zeef	zeif	zeef	tzeeeif	
ezeeq	zeeq	zeeq	zeiq	zeeq	zeeeeq	
ebbi	ebbi	ebbi	ebba	ebbi	teebbi	
ebbed	ebed	ebed	ebid	ebed	ebbed	
ebbez	ebez	ebez	ebiz	ebez	ebbez	
eeceq	eeceq	eeceq	eciq	eeceq	taecaq	
eacer	eacer	eucer	eucer	eacer	teacar	
eudd	/	/	/	/	/	
eeddi	eeddi	eedda	eedda	eeddi	teedday	
eedem	edem	edem	edim	edem	taedam	

eeder	/	/	/	/	/	
eeder	/	/	/	/	/	
eedef	eṭef	eṭef	eṭif	eṭef	ṭaetaf	
eedel	eṭel	eṭel	eṭil	eṭel	ṭaetal	
eedem	/	/	/	/	/	
eedes/ eedeş	eṭes	eṭes	eṭis	eṭes	eettes	
eefej	/	/	/	/	/	
eefen	eṭfen	eṭfen	eṭfin	eṭfen	eeffen	
eefeṭ	/	/	/	/	/	
eefes	eṭfes	eṭfes	eṭfis	eṭfes	eeffes	
eegēz	egez	egez	egiz	egez	eeggez	
eahed	eahed	euhed	euhed	eahed	teahad	
eujj	/	/	/	/	/	
eejeb	eṭjeb	eṭjeb	eṭjib	eṭjeb	eējeb	
eejel	eṭjel	eṭjel	eṭjil	eṭjel	eējel	
eujen	/	/	/	/	/	
eekki	eekki	eekka	eekka	eekki	teekki	
eekṭef	ekeṭef	ekeṭef	ekeṭif	ekeṭef	taekaf	
eekes	eṭkes	eṭkes	eṭkis	eṭkes	eekkes	
eefef	eṭef	eṭef	eṭif	eṭef	teelaf	
eeklek	/	/	/	/	/	
eelem	eṭlem	eṭlem	eṭlim	eṭlem	teelam	
eelli	eelli	eelli	eella	eelli	teelay	
eemel	eṭmel	eṭmel	eṭmil	eṭmel	teamal	
eemer	eṭmer	eṭmer	eṭmir	eṭmer	teemar	
eenni	/	/	/	/	/	
eaned	eaned	euned	euned	eaned	teanad	
eaqeb	eaqeb	euaqeb	euaqeb	eaqeb	teaqab	
eeqel	eṭqel	eṭqel	eṭqil	eṭqel	teeqal	
eeqer	/	/	/	/	/	
eerēḍ	eṭerēḍ	eṭerēḍ	eṭerēḍ	eṭerēḍ	teeraṭ	
ierid	ierit	eṭrit	eṭrit	eṭrit	teeraṭ	
eerēf	/	/	/	/	/	
eereg	/	/	/	/	/	
eerek	eṭrek	eṭrek	eṭrik	eṭrek	eerrek	
eerēq	eṭerēq	eṭerēq	eṭerēq	eṭerēq	eerreq	
eerēs	/	/	/	/	/	
eerri	eerri	eerra	eerra	eerri	teerri	
eass	euss	euss	euss	eass	teussu	
eesel	/	/	/	/	/	
eeşer	/	/	/	/	/	
eeteb	eṭeb	eṭeb	eṭib	eṭeb	eebbi	
eeteq	/	/	/	/	/	
eeter	/	/	/	/	/	
eedel	eṭel	eṭel	eṭil	eṭel	eettel	
eiwed	eawed	eawed	eawed	eawed	teawwad	
eewej	ewej	ewej	ewij	ewej	eewwuj	

eiwen	ɛawen	ɛawen	ɛawen	ɛawen	tɛawan	
eiwez	/	/	/	/	/	
eeyed	/	/	/	/	/	
ɛayen	/	/	/	/	/	
ɛayer	ɛayer	ɛayer	ɛayer	ɛayer	tɛayyar	
euzz	euzz	euzz	euzz	euzz	tɛuzzu	
iɛziz	iɛziz	ɛziz	ɛziz	ɛziz	tɛziz	
eezeg	ɛazeg	ɛuzeg	ɛuzeg	ɛazeg	tɛuzzug	
eezel	ɛzel	ɛzel	ɛzil	ɛzel	tɛzal	
eezem	ɛzem	ɛzem	ɛzim	ɛzem	tɛzam	
	ɛebbi	ɛebba	ɛebba	ɛebbi	tɛebbi	
	ftec	ftec	ftic	ftec	fettec	
	mɛes	mɛes	mɛis	mɛes	tɛeas	
	sameh	sumeh	sumeh	sameh	tsamah	
	laqem	luqem	luqem	laqem	tlaqam	
	rgagi	rgagi	rgagi	rgagi	tergigi	
	qqel	qqel	qqul	qqel	teqqal	
	tisiq	tisiq	tisiq	tisiq	tisseq	
	s̄ter	s̄ter	s̄tir	s̄ter	set̄ter	
	sset̄	sset̄	sset̄	sset̄	tesset̄	
	wɛed	wɛed	wɛid	wɛed	tewɛad	
	cwet̄	cwet̄	cwīt̄	cwet̄	cewwet̄	
	wcem	wcem	wcim	wcem	weccem	
	stad	stad	stad	stad	testad	
	tway	tway	tway	tway	tewway	
	seqsi	seqsa	seqsa	seqsi	seqsay	
	ssey	ssey	ssay	ssey	tessey	
	lawah	lawah	lawah	lawah	tlawah	
	smir	smar	smar	smir	semmaray	
	tqel	tqel	tqil	tqel	teqqel	
	jjer	jjer	jjir	jjer	tejjar	

Amawal

Tamagamt →rurel (BOUDRIS (B.), sb 102)

Tuggi →réalisation (BENTALEB (B.), sb 182)

Ilsiman →idiolecte (BERKAI (A.), sb 103)

Asmer, asugen →conception (BENTALEB (B.), sb 53)

Timyiwent →comunauté (BERKAI (A.), sb 72)