
\begin{itemize}
  \item \text{A} \rightarrow \text{V} (‘make A’): \textit{A-man}.
  \item \text{V} \rightarrow \text{A}:
    \begin{tabular}{|c|c|c|}
    \hline
    \text{V} & ‘that is always being \text{V}ed’ & ‘that is always \text{V}ing \text{N}s’ \\
    \hline
    -\text{n} & -l-\text{mu}\text{\-Ja} & \text{N}…-l-\text{\-Na}y-\text{mu}\text{\-Ja} \\
    -\text{ju} & -y-\text{mu}\text{\-Ja} & \text{N}…-nay-\text{mu}\text{\-Ja} \\
    \hline
    \end{tabular}
\end{itemize}

Every noun is preceded by an article:

\begin{itemize}
  \begin{tabular}{|l|l|}
    \hline
    \textit{O} & \textit{S} & \text{women, dangerous animals and objects} \\
    \hline
    \textit{balan} & \textit{bangun} & \\
    \textit{bayi} & \textit{bangul} & men, animals \\
    \textit{bala} & \textit{bangu} & all other things \\
    \hline
  \end{tabular}
\end{itemize}

The subject and its attributes get the ending

\begin{itemize}
  \item -\text{\-Na}, if the word ends in a vowel and has two syllables;
  \item -\text{\-Da}, if the word ends in a vowel and has more than two syllables;
  \item -D\text{\-Du}, if the word ends in a consonant; \text{D} is a stop articulated in the same place in the mouth as the final sound of the word.
\end{itemize}

(a) The grasshopper is neither a woman nor a dangerous animal, but takes the same article, so it must be the “old woman” from the myth. The linguist thought that \textit{bangun bundi\text{n}u} in example (14) was an error.

(b) 17. \textit{balan \-Na\-\text{\-Na} bangul \-Na\-\text{\-Na} guniy\-\text{\-Na} \-\text{\-Na} bambun\-\text{\-Na}}.
    The father that is always being searched for is healing the girl.
18. \textit{bala diban bilim\-\text{\-Na} bangun bi\-\text{\-Na}ri\-\text{\-Na} gun\-\text{\-Na}}.
    The lizard is searching for the stone that is always being pushed.
19. \textit{bayi bargan bangul ya\-\text{\-Na}\-\text{\-Na} gubim\-\text{\-Na}\-\text{\-Na}na\-\text{\-Na} \-\text{\-Na} ban\-\text{\-Na}}.
    The man that is always blaming doctors is following the wallaby.

(c) 20. The little wallaby is looking at the dragonfly.
    \textit{bayi yirin\-\text{\-Na}l\-\text{\-Na} bangul barg\-\text{\-Na}dun\-\text{\-Na} wuran\-\text{\-Na} bu\-\text{\-Na}}.
    The aunt that is always being followed is bending the feather.
21. The sleeping possum is ignoring the loud noise.
    \textit{bala mu\-\text{\-Na} ya\-\text{\-Na} bangun mug\-\text{\-Na}\-\text{\-Na} ban\-\text{\-Na}l\-\text{\-Na}na\-\text{\-Na} wa\-\text{\-Na}man}.
22. The caterpillar is searching for the man that is always carrying stones.
    \textit{bayi ya\-\text{\-Na} dibandim\-\text{\-Na}n\-\text{\-Na}na bangul bayimbambu gun\-\text{\-Na}nu}.
Problem #2.

<table>
<thead>
<tr>
<th>Umbu-Ungu</th>
<th>Umbu-Ungu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 telu</td>
<td>24 tokapu</td>
</tr>
<tr>
<td>2 talu</td>
<td>24 tokapu talu</td>
</tr>
<tr>
<td>3 yepoko</td>
<td>24 tokapu yepoko</td>
</tr>
<tr>
<td>12 rurepo</td>
<td>alpha - beta := (alpha - 4) + beta,</td>
</tr>
<tr>
<td>16 malapu</td>
<td>alpha in {12, 16, 20, 24, 28, 32},</td>
</tr>
<tr>
<td>20 supu</td>
<td>beta in {1, 2, 3}</td>
</tr>
<tr>
<td>24 tokapu</td>
<td>gamma + delta,</td>
</tr>
<tr>
<td>28 alapu</td>
<td>gamma = 24k, k in {1, 2, 3},</td>
</tr>
<tr>
<td>32 polangipu</td>
<td>9 &lt;= delta &lt;= 32, delta != 24</td>
</tr>
</tbody>
</table>

(a) tokapu polangipu = 24 + 32 = 56,
    tokapu talu rureponga telu = 24 x 2 + 12 - 3 = 57,
    tokapu yepoko malapunga talu = 24 x 3 + 16 - 2 = 86,
    tokapu yepoko polangipunga telu = 24 x 3 + 32 - 1 = 101.

(b) 13 = 16 - 1 = malapunga telu,
    66 = 24 x 2 + 20 - 2 = tokapu talu supunga talu,
    72 = 24 x 3 = tokapu yepoko,
    76 = 24 x 2 + 28 = tokapu talu alapu,
    95 = 24 x 3 + 24 - 3 = tokapu yepoko tokapunga yepoko.

Problem #3.

<table>
<thead>
<tr>
<th>1st person sg</th>
<th>1st person pl</th>
<th>2nd person sg</th>
<th>2nd person pl</th>
<th>3rd person sg</th>
<th>3rd person pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>A nau-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B natzai-</td>
<td>gatzaizki-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>-t</td>
<td>-gu</td>
<td>-zu</td>
<td>-zue</td>
<td>-te</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>ahatzu</td>
<td>- about whom -</td>
<td>who forgot</td>
</tr>
<tr>
<td>hurbildu</td>
<td>who</td>
<td>whom</td>
</tr>
<tr>
<td>lagundu</td>
<td>whom</td>
<td>who</td>
</tr>
<tr>
<td>mintzatu</td>
<td>who</td>
<td>to whom</td>
</tr>
<tr>
<td>ukitu</td>
<td>whom</td>
<td>who</td>
</tr>
</tbody>
</table>

(a) ahatzu ditut ahatzu zaizkit
    I forgot them
    lagundu dute
    they helped him
    lagundu nauzue
    you(pl) helped me
    mintsatu natzaizku
    I talked to you(sg)
    mintsatu gatzaizkizue
    we talked to you(pl)
    mintsatu zaizkigu
    they talked to us
    ukitu ditugu
    we touched them
    ukitu naute
    they touched me

(b) you(sg) touched me — ukitu nauzu, they approached me — hurbildu zaizkit.

(c) lagundu dut — I helped him, hurbildu gatzaizkizu — we approached you(sg).

(d) you(sg) forgot him (ahaztu zaizku) — ahatzu duzu.
Problem #4. The sentences have the following structure: \[ \text{S} \ paav \ O \ [O'] \] (S: subject, V: verb, O: object, O': another object).

<table>
<thead>
<tr>
<th>give</th>
<th>call</th>
<th>strike, kill</th>
</tr>
</thead>
<tbody>
<tr>
<td>O to whom</td>
<td>whom whom</td>
<td>whom whom</td>
</tr>
<tr>
<td>O' what</td>
<td>what with what</td>
<td></td>
</tr>
</tbody>
</table>

Every noun is preceded by an article, which is \( a \) if this is the first third person in the sentence and \( \text{bona} \) otherwise. The form of the 3rd person sg pronoun \( e \) or \( \text{bona} \) is chosen in the same way.

Personal pronouns:

<table>
<thead>
<tr>
<th></th>
<th>1st person sg</th>
<th>1st person pl</th>
<th>2nd person sg</th>
<th>2nd person pl</th>
<th>3rd person sg</th>
<th>3rd person pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>( \text{enaa} )</td>
<td>( \text{enam} )</td>
<td>( \text{ean} )</td>
<td>( \text{eam} )</td>
<td>( \text{eove} )</td>
<td>( \text{eori} )</td>
</tr>
<tr>
<td>O, O'</td>
<td>( \text{anaa} )</td>
<td>( \text{vuan} )</td>
<td>( \text{ameam} )</td>
<td>( e, \text{bona} )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a)  13. \( \text{Eam paa ani a overe.} \) — You(pl) ate the coconut.

14. \( \text{Ean paa tasu a oraoraa bona kae.} \) — You (sg.) struck the sorcerer with the bag.

15. \( \text{Eove paa tara ameam.} \) — He saw you (pl.).

(b)  16. We gave the food to you (sg.). — \( \text{Enam paa hee vuan a taba’ani.} \)

17. He called me a child. — \( \text{Eove paa dao anaa bona beiko.} \)

18. I killed him with it. — \( \text{Enaa paa asun e bona.} \)

19. The sorcerer gave the fish to the boy. — \( \text{A oraoraa paa hee bona visoasi bona iana.} \)

What was mentioned in the context is moved to the first place and takes the article \( a \). If thereby a pronominal subject moves after the verb, it loses its initial \( e- \). If the moving subject is a noun, it preserves its article \( a \).

(c)  20. (Why was the sorcerer offended?) They called the sorcerer a woman.

— \( \text{A oraoraa paa dao ori bona moon.} \)

21. (Why is this axe wet?) The boy killed the fish with the axe.

— \( \text{A toruara paa asun a visoasi bona iana.} \)
Problem #5. When two words constitute a phrase, the form of the first word undergoes the following change:

- VCV → -VC
- VCu → -VC
- VCi → -VC
- VCa → -VCaC

(V: vowel, C: consonant).

The same thing happens when an adjective is formed by doubling a noun or a verb: ‘ele + ‘ele → ‘el’ele ‘to be near $\times 2 = \text{shallow}$’.

The word order is

- $[N_1 N_2]$ ($N_1$: modified, $N_2$: modifier);
- $[N A]$ (also with the meaning ‘one who has A N’: huag ‘el’ele ‘heart + shallow = impatient’);
- $[V O]$ (the resulting compound word can be a noun or a verb: a‘öf fau ‘to exhaust + year = year’s end’, hül hafu ‘to turn over + rock = to blow (of a hurricane)’).

(a) ‘u’u — arm/hand, isu — nose, kia — neck, leva — hair, mafa — eye, susu — breast, huga — heart.

(b) tiro — glass (stuff),
    poga — hole,
    huag lala — patient,
    haf pührkö — volcanic rock,
    maf pogi = maf pala — blind.

(c) round — kalkalu; to cut copra — ‘ol niu; curly hair — leav pirpiri; sticky — pulpulu; to flash — rima; rubbish — mafa.

(d) • word: fäega (or fäeaga, fäeagu).
    • to exhaust: a‘öfi (or a‘öfı, a‘öfö, a‘öfu, a‘öfü, a‘öfü).