

# Problem #3: Coastal Marind

or: What are those verbs doing?!

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# Thanks!

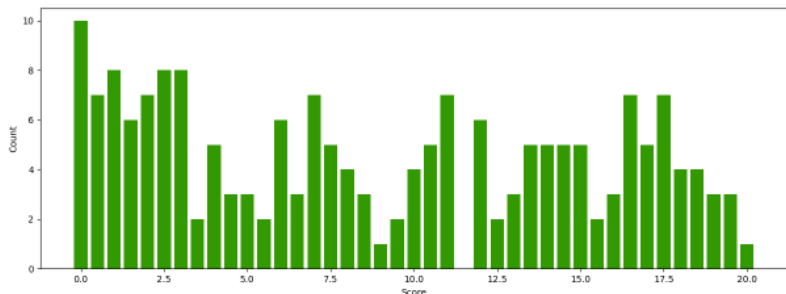
My thanks to the following people:

- ▶ **Bruno Olsson** – the linguist who wrote *A grammar of Coastal Marind* (2021), my primary source for the problem.
- ▶ **Liam McKnight, Boris Iomdin, and Gabrijela Hladnik** – the IOL jury members who, in addition to myself, graded your many solutions to this problem.



Out of 205 participants, 186 submitted an answer to problem #3.

The distribution of their scores is as follows:



- ▶ The median score is 8
- ▶ The average is 8.85
- ▶ Every possible score was reached ...except 11.5

# Introduction to the solution

The problem presents verb forms in a standard IOL format.

A solver might realize that...

- ▶ There is inflection for ‘mood’ (*aw, ob, really; in vain*).
- ▶ There is inflection for subject and object.
- ▶ *Most* categories are represented by prefixes.  
... but some arguments are indicated within the verb stem.
- ▶ Three phonological rules apply.

... which is all you need!

Let's see things in a bit more detail.





## Argument marking III: paradigm

The prefixes and infixes are as follows:

	<i>I or we</i>	<i>you<sub>sg</sub></i>	<i>you<sub>pl</sub></i>	<i>he</i>
Prefix	<b>nak-</b>	<b>o-</b>	<b>e-</b>	<b>(a-)</b>
Infix	<b>-ana-</b>	<b>-aya-</b>	<b>-a-</b>	<b>-e-</b>

Some things to note:

- ▶ The **a-** prefix is different (this can be interpreted in several ways).
- ▶ Phonological variants: **nak-** is **nam-** before **b**, and **o-** **e-** are sometimes **u-** **i-** (again, we'll come back to it!).
- ▶ First person singular and first person plural are identical.

# Argument marking IV: first person plural

A prefix *e-* appears with both *we* and *us*:

*I/we*                      *we!*                      *you<sub>pl</sub>*  
↓                              ↓                              ↓  
**nam**    **b**    **e**    -    **ot**    **a**    **b**    = *We really chased you<sub>pl</sub> away.*  
          ↑                              ↑                              ↑  
          *really*                              *chased away*

*you<sub>pl</sub>*                      *us!*                      *me/us*  
↓                              ↓                              ↓  
**e**    **b**    **e**    -    **yad**    **ana**    **wn**    = *You<sub>pl</sub> really left us behind.*  
          ↑                              ↑                              ↑  
          *really*                              *left behind*

# Now what about those vowel alternations?

There are two alternating pairs: **e/i** and **o/u**.

	Subject markers	Verb roots
<b>e, o</b>	<u>o</u> b, e, e <u>b</u> e, <u>o</u> ba <u>m</u>	<u>o</u> ta <u>b</u> , ke <u>s</u> eh, ho <u>y</u> ab, e <u>s</u> eb, ko <u>l</u> e <u>w</u> n
<b>i, u</b>	<u>u</u> bate, i <u>b</u> atum, <u>u</u> ba <u>m</u> u <u>m</u>	ku <u>l</u> aya <u>w</u> n, hu <u>y</u> anab, i <u>s</u> anab, ki <u>s</u> ayah

Notice something?

**e o** → **i u** when two more syllables follow. (But not the reverse.)

# Summary of the theory

A schematic presentation of the theory might look something like this:

$$\left\{ \begin{array}{l} \mathbf{nak} \quad I, we \\ \mathbf{o} \quad you_{sg} \\ \mathbf{e} \quad you_{pl} \end{array} \right\} + \left\{ \begin{array}{l} \mathbf{bat} \quad aw \\ \mathbf{bam} \quad ob \\ \mathbf{b} \quad really \end{array} \right\} + (\mathbf{um} \quad in \ vain) + (\mathbf{a}, \emptyset \quad he) +$$
  
$$+ (\mathbf{e} \quad we, \ us) \quad \text{---} \quad \text{Stem} + \left\{ \begin{array}{l} \mathbf{ana} \quad me, \ us \\ \mathbf{aya} \quad you_{sg} \\ \mathbf{a} \quad you_{pl} \\ \mathbf{e} \quad him \end{array} \right\} + \text{Stem suffix}$$

With a few caveats:

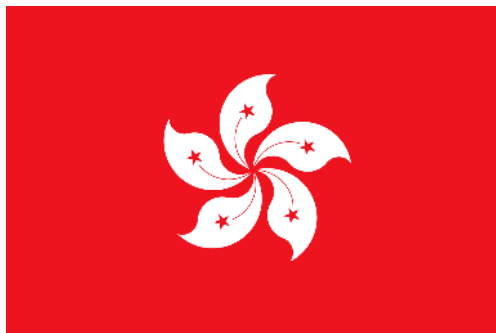
- ▶ Some intransitive verbs have only an object and no subject.
- ▶ The **a** (*he*) prefix is elided if the preverb contains other vowels.
- ▶ **k** → **m** before **b**.
- ▶ **e o** → **i u** in the antepenultimate syllable (of either verb-half).

	Coastal Marind	English
18.	e-yuyanah	<i>We shuddered.</i>
19.	ba-ihwin	<i>He really cried.</i>
20.	nabum-kisayah	<i>I really spat on you<sub>sg</sub> in vain.</i>
21.	bat-yadawn	<i>Aw, he left you<sub>pl</sub> behind.</i>
22.	ubamum-kolewn	<i>Oh, you laughed at him in vain!</i>
23.	<i>a-tameb</i>	He floated to the surface.
24.	<i>obat-dahetok</i>	Aw, you <sub>sg</sub> returned.
25.	<i>nabam-boyeb</i>	Oh, I silenced him!
26.	<i>be-utanab</i>	He really chased us away.
27.	<i>ibume-kisanab</i>	You <sub>pl</sub> really spat on us in vain.

# Best solution award for problem #3

?

# Tam Lok Hang



Hong Kong