

# Eleventh Taiwan Olympiad in Linguistics

## Round 2 Solutions

### Problem 1 Chuvash

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Vowels are divided into two groups, strong and weak, for determining stress position.

Strong vowels: **а, е, и, u, ʉ, y**

Weak vowels: **ɔ, ø**

The stress is on the last strong vowel of a word.

Vowels are divided into two groups, front and back, for vowel harmony.

Front vowels: **е, и, y, ø**

Back vowels: **а, ʉ, u, ɔ**

Objective suffix: **-na/-ne** if following a vowel and **-a/-e** if following a consonant

Causative suffix: **-ʃɔn/-ʃɔn**

III plural suffix: **-sem**

Adjective suffix: **-lɔ/-lø**

### Answer

(a)

1. **arma'na**
2. **kyrʃø'ri**
3. **'tɛap**
4. **i'lem**
5. **i'lemlø**
6. **'ʃanɔɕ**
7. **ø'ne**
8. **øne'ne**
9. **parti'sem**
10. **'jatlɔ**
11. **'ɛyɕ**
12. **laʃa'na**
13. **ar'manʃɔn**

(b)

14. *hair*
15. *to the horse*
16. *for the mill*
17. **vu'ta**
18. **juto'na**
19. **'pullo**
20. **'təpɫo**
21. **tøry'fe**
22. **'jat**
23. **'fanəɫo**

### Marking Criteria

For Question 1–13 and the stress in 17–18, the correct number and the corresponding points are as below.

# correct	0–7	8	9	10	11	12	13	14	15	16	17	18	19	20
points	0	0.5	1	1.5	2	2.5	3	4	5	6	7	8.5	10	11.5

2 pts are deducted if the answers are recognizable but does not use ' to indicate the stress.

0.5 pts each for Question 14–16, and 1 pt each for words in Question 17–23. No partial points for Chuvash words.

### Additional Information

There are two theories regarding stress: if a word has no stress  $\sigma_s$ , one theory holds that it is located in the first syllable ( $\sigma_w$ ), while the other theory holds that there is no stress at all.

### Reference

- Dobrovolsky, Michael (1999). The phonetics of Chuvash stress: implications for phonology. In John J. Ohala, Yoko Hasegawa, Manjari Ohala, Daniel Granville & Ashlee C. Bailey (eds.) *Proceedings of the 14th International Congress of Phonetic Sciences. Vol. 1.* (pp. 539–542). University of California.
- Krueger, John R. (1961) *Chuvash Manual: Introduction, Grammar, Reader and Vocabulary.* Indiana University and Mouton & Co.
- Lindsey, Kate L. (2015). Solving Chuvash stress with sonority-sensitive feet. Paper presented at the Annual Meeting on Phonology. Vancouver, Canada. October 11.
- Электронлă сăмахсар, <https://samah.chv.su/>

**Problem 2** Temiar

Person prefixes (partial) are as below:

	I(sg.)	I(du.inc)	II(sg.)	III(sg.)
Indicative mood	<b>?i-</b>	<b>?a-</b>	<b>ha-</b>	<b>na-</b>
Irrealis mood*	<b>?im-</b>	<b>?am-</b>	<b>ham-</b>	<b>nam-</b>

Shaded cases are absent in this problem.

Imperfective marker: **CεCCVC**

$$\begin{cases} C_iVC_f \rightarrow C_i\epsilon C'_fC_iVC_f \\ C_iC_mVC_f \rightarrow C_i\epsilon C'_fC_mVC_f \end{cases} \quad \forall C'_f \in \{p, t, c, k\} \rightarrow \{m, n, \eta, \eta\}$$

Middle voice marker: **CaCVC**

$$\begin{cases} C_iVC_f \rightarrow C_i\mathbf{a}C_iVC_f \\ C_iC_mVC_f \rightarrow C_i\mathbf{a}C_mVC_f \end{cases}$$

$C_i$  initial consonant       $C_m$  middle consonant       $C_f$  final consonant

Progressive marker: **b°**

The functions of aspect and voice are as below:

Aspect Voice	Perfective†	Imperfective	Progressive
Base Voice	<b>C(C)VC</b> an action viewed as a whole	<b>CεCCVC</b> an unfinished action that is intentionally being undertaken by the subject and will be performed shortly <i>be going to V soon‡</i>	<b>b°CεCCVC</b> an ongoing action of the subject <i>be Ving</i>
Middle Voice	<b>CaCVC</b> <u>Uncontrolled</u> : an action without full control or consciousness <i>suddenly V</i> <u>Mutual</u> : an activity or state undertaken or experienced by the members of a group mutually at the same time (with a sense that each member does not have full control of the whole group) <i>V together</i>	<b>b°CaCVC</b> <u>Uncontrolled</u> : the continued state or condition caused by an uncontrolled action <i>be Ving nonstop/uncontrollably</i> ; <u>Mutual</u> : an ongoing action of the members of a group <i>be Ving together</i>	

There is no tense marker.

\* Regardless of tense. In this problem, it is used for unfinished action that is intentionally being undertaken by the subject.

† Some scholars prefer to call it 'uninflected' rather than perfective, as its actual expressive scope differs slightly from the perfective aspect commonly found in mainstream research.

‡ In this problem, the word <sup>ʔ</sup>**akaal** (*soon*) is used to avoid ambiguity.

本題部分動詞之語意如下：

Verb	Base voice	Middle voice (Uncontrolled)	
	Perfective	Non-progressive	Progressive
<b>caal</b>	<i>talk</i>	<i>suddenly talk</i>	<i>be talking nonstop</i>
<b>slɔŋ</b>	<i>go to sleep</i>	<i>fall asleep</i>	<i>have fallen asleep and be not awaking</i>
<b>lug</b>	<i>laugh</i>	<i>suddenly laugh</i>	<i>be laughing uncontrollably</i>
<b>yaap</b>	<i>cry</i>	<i>suddenly cry</i>	<i>be crying uncontrollably</i>
<b>knɔɔm</b>	<i>pee</i>	<i>suddenly pee</i>	<i>be crying uncontrollably</i>
<b>bhup</b>	<i>fart</i>	<i>suddenly fart</i>	<i>be farting uncontrollably</i>

Shaded cases are absent in this problem.

### Answer

(a)

13. *We two laughed when we (two) knew.*
14. *I suddenly peed while it was raining.*
15. *He cried after he talked.*
16. *I was going to ask soon, but you went to sleep.*

(8 pts) [2 pts each.]

(b)

17. **ʔahahɛɛk ʔapaləəŋ**
18. **nabahup beel hab<sup>ə</sup>ɕɛlcaal**
19. **namsemlap ʔakaal sbab ʔib<sup>ə</sup>pɛŋpɔɔc**
20. **naslɔɔʔ sbab nab<sup>ə</sup>salɔŋ**

(12 pts) [3 pts each.]

### Marking Criteria

For Questions 13–16, 0.5 pts are deducted for each incorrect answer (including vocabulary—verbs, conjunctions, temporal adverbs, etc.—person, aspect, voice, and syntax). Same meanings are accepted.

For Questions 17–20, the deduction rules are as follows (“incorrect” includes misspellings, as well as missing or extra letter):

Per Clause (maximum deduction of 1.5 pts):

- ◆ Incorrect person prefix: 0.5 pts are deducted if only the irrealis mood marker **m** is incorrect; otherwise, 1 pt is deducted.
- ◆ Incorrect aspect or voice: 0.5 pts are deducted if only the progressive marker **b<sup>o</sup>** is missing or extra; otherwise, 1 pt is deducted.
- ◆ Incorrect verb: 1.5 pts are deducted.
- ◆ Other letter errors: 0.5 pts are deducted for each incorrect letter (including failures to apply phonological rules correctly).

Each redundant clause: 1 pt is deducted.

Each incorrect conjunction or temporal adverb: 0.5 pts are deducted.

Incorrect syntax: 0.5 pts are deducted.

## Reference

- Benjamin, G. (1976). An Outline of Temiar Grammar. In P. N. Jenner, L. C. Thompson, & S. Starosta (Eds.), *Austroasiatic Studies Part 1* (pp. 129–188). University of Hawaii Press
- Benjamin, G. (2026). *A new outline of Temiar grammar, Part 1*. Academia. [https://www.academia.edu/19703112/A\\_new\\_outline\\_of\\_Temiar\\_grammar\\_Part\\_1](https://www.academia.edu/19703112/A_new_outline_of_Temiar_grammar_Part_1)
- Quinton, D. P. (2026). *A Grammar of Kelantan Temiar*. figshare. <https://doi.org/10.6084/m9.figshare.23566272>
- Quinton, D. P. (2026). *Dictionary of Kelantan Temiar*. figshare. <https://doi.org/10.6084/m9.figshare.24630705>

### Problem 3 Kaigani Haida

The word order is NP [modifier + head] + Classifier + Numeral.

The classifiers that appear in this problem are as below:

**sk'a** slender hard object      **skáa** spherical small object      **tl'a** flat object  
**sga** slender soft object      **ga** container-like object

The meaning of a noun may vary depending on the classifier.

#### Answer

(a)

- |   |   |
|---|---|
| 1. <b>gáan skáa sgwáansang</b>            | C. <i>a berry</i>                       |
| 2. <b>gáan sk'a hlgúnahl</b>              | K. <i>three bananas</i>                 |
| 3. <b>gáadaangw ga hlgúnahl</b>           | J. <i>three bathtubs</i>                |
| 4. <b>kit'uu sk'a sgwáansang</b>          | D. <i>a harpoon</i>                     |
| 5. <b>kit'uu dáagal sga stánsang</b>      | M. <i>four harpoon's lanyards</i>       |
| 6. <b>kíihlaa dláanwaay ga sgwáansang</b> | B. <i>a kitchen sink</i>                |
| 7. <b>kíihlaa tl'a sgwáansang</b>         | A. <i>a tray</i>                        |
| 8. <b>k'án sga sgwáansang</b>             | E. <i>a (blade of) grass</i>            |
| 9. <b>k'án sk'a sdáng</b>                 | G. <i>two reeds</i>                     |
| 10. <b>sáandiigaa sga tléehl</b>          | R. <i>five weeks</i>                    |
| 11. <b>sgi skáajaaw skáa stánsang</b>     | P. <i>four baseballs</i>                |
| 12. <b>sgíndaaw tl'a hlgúnahl</b>         | H. <i>three rudders</i>                 |
| 13. <b>skáy ga stánsang</b>               | N. <i>four threaded lids</i>            |
| 14. <b>skáy skáa hlgúnahl</b>             | I. <i>three whorled univalve shells</i> |
| 15. <b>stáw stlíin sk'a tléehl</b>        | Q. <i>five sea urchin spines</i>        |
| 16. <b>xyáy sk'a sdáng</b>                | F. <i>two arms (of human)</i>           |
| 17. <b>xyáy tl'a stánsang</b>             | L. <i>four pectoral fins</i>            |
| 18. <b>xángaang dláanwaay ga stánsang</b> | O. <i>four wash basins</i>              |

(11 pts) [The correct number and the corresponding points are as below.]

# correct	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
points	0	0	1	2	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	10	11

(b)

19. *three lanyards*  
 20. *four bats*

(3 pts) [1.5 pts each. 1 pt is deducted for each incorrect numeral or noun.]

(c)

21. **kíhlaa ga sgwáansang**

22. **sgíndaaw sk'a tléehl**

23. **stáw skáa sdáng**

(6 pts) [2 pts each. 1 pt is deducted for each incorrect word. 0.5 pt is deducted for each spelling mistake that does not affect the meaning.]

### **Reference**

Keen, J. H. (1906). *A Grammar of the Haida Language*. Society for Promoting Christian Knowledge.

Lachler, J. (2010). *Dictionary of Alaskan Haida*. Sealaska Heritage Institute.

Lawrence, E. (2010). *Alaskan Haida Phrasebook*. Sealaska Heritage Institute.

### **Photo Credit**

steering paddle © The Metropolitan Museum of Art

bowl © Manitoba Museum

whorled univalve shell © National Maritime Museum

## Problem 4 Malak Malak

Sentence structure of position:

**miri** (*sun*) + [sun direction] + V (*stand*)

→[mentioned person] *stands in* [sun direction].

[Person 1] + **miri** (*sun*) + [sun direction 1] + [Person 1] + **miri** (*sun*) + [sun direction 2]

→[Person 1] *stands in* [sun direction 1] *while* [Person 2] *stands in* [sun direction 2].

Sentence structure of facing direction:

[Person/Toponym] + [body direction] + coverb (*stand*) + V (*stand*)

→[mentioned person] *is facing/has his or her back to* [Person/Toponym]

→*I am facing/My back is to* [mentioned person].

[monsoon direction] + **pudang** (*be facing*) + V (*stand*)

→[mentioned person] *is facing* [monsoon direction].

The inflection of V(*stand*) is as below:

Person	I (sg.)	III(sg.m)	III(sg.f)
Inflection	<b>eyue</b>	<b>yueyue</b>	<b>nuentjue</b>

Sun direction words (**-ma** is continuous suffix) and their meanings are as below:

Sun direction words	Meaning	Stem	Meaning
<b>baigama</b>	<i>where the sun rises (east)</i>	<b>baiga</b>	<i>rise, ascend</i>
<b>tjalkma</b>	<i>where the sun sets (west)</i>	<b>tjalk</b>	<i>go down, descend</i>
<b>kantjukma</b>	<i>where the sun is on top (north)</i>	<b>kantjuk</b>	<i>on top</i>

Body direction words (**ang** is coverb *give*) and their meanings are as below:

Body direction words	Meaning	Stem	Meaning
<b>pudang</b>	<i>be facing</i>	<b>pud</b>	<i>chest</i>
<b>payagang</b>	<i>have one's back to</i>	<b>payag</b>	<i>back</i>

Monsoon direction words (**-en** is direction suffix) and their meanings are as below:

Monsoon direction words	Meaning	Stem	Meaning
<b>nulyen</b>	<i>sea wind (northwest)</i>	<b>nuly</b>	<i>sea wind</i>
<b>dangiden</b>	<i>inland wind (southeast)</i>	<b>dangid</b>	<i>land wind</i>

Shaded cases are absent in this problem.

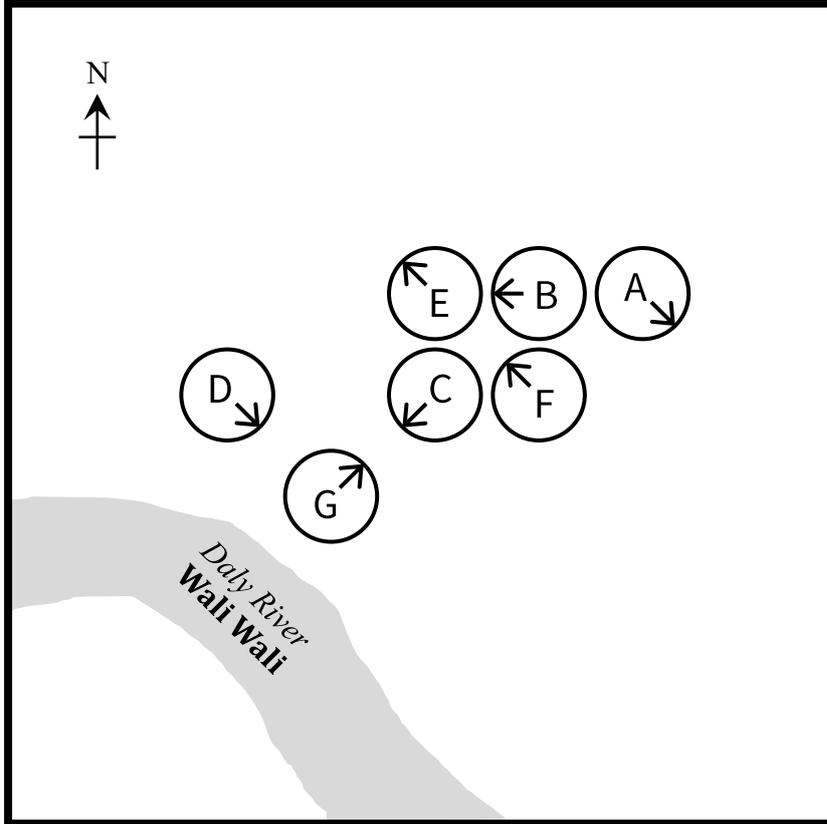
**Answer**

(a)

A	B	C	D	E	F	G
Jigbala	Kabat	Pirak	Kitty	Biddy	Matjarr	Kunbuk

(6 pts) [1 pt is deducted for each incorrect answer.]

(b)



(8 pts) [1pt for each facing direction and 2 pts for the position of G.]

(c)

(**Midinyen**/She is) *to the north* (of me).

(1.5 pts) [Similar meanings are acceptable.]

(d)

1. **Midinyen payagang tjedali yueyue**
2. **dangiden pudang nuentjue**
3. **Tapnuk miri baigama Midinyen miri tjalkma** 或 **Midinyen miri tjalkma Tapnuk miri baigama**

(4.5 pts) [1.5 pts each.]

#### **Additional Information**

The names appearing in this problem are the actual names of Malak Malak speakers, past and

present, recorded in literature.

## Reference

- Hoffmann, D. (2013). Mapping worlds: Frames of reference in MalakMalak. *Proceedings of the 39th Annual Meeting of the Berkeley Linguistics Society*, 380–395.
- Hoffmann, D. (2014). Mapping the language: How a dying language loses its place in the world. In G. Zuckermann, J. Miller, & J. Morley (Eds.), *Endangered words, signs of revival* (pp. 1–18). Australex.
- Hoffmann, D. (2019). Restrictions on the usage of spatial frames of reference in location and orientation descriptions: Evidence from three Australian languages. *Australian Journal of Linguistics*, 39(1), 1–31.
- Lindsay, B. Y., Pirak, R., Mijat, F., & Hoffmann, D. (2017). *A dictionary of MalakMalak*. Academia. [https://www.academia.edu/34875677/A\\_Dictionary\\_of\\_MalakMalak](https://www.academia.edu/34875677/A_Dictionary_of_MalakMalak)
- Palmer, B., Hoffmann, D., Blythe, J., Gaby, A., Pascoe, B., & Ponsonnet, M. (2022). Frames of spatial reference in five Australian languages. *Spatial Cognition & Computation*, 22(3–4), 225–263.



(20pts) [3 pts each for Question 8 and 10, 2 pts each for Question 1, 2, 6, and 12, 1 pt each for the rest.]

**Reference**

Anderson, G. D. S. (2008). *The Munda Languages*. Routledge.

Mohan, S. (2012). Numeral Expressions in Kharia Korku, and Sora: A Comparative Account. *Bulletin of the Deccan College Post-Graduate and Research Institute*, 72/73, 367–374.