

en(B)

Eighteenth International Linguistics Olympiad

Ventspils (Latvia), 19–23 July 2021

Individual Contest Solutions

Problem 1.

- ena 1, **wija** 2, **wido** 3, **wi** 4, **idibi** 5, **benomi** 6, **waroewo** 8, **ije** 9
- rati 10, **mepina** 20, **joka rati** 30, **mepija** 40, **rati beo** 50, **moeto** 60
- $\alpha\text{-ma}$ $10\beta = 10\beta + \alpha$ ($1 \leq \alpha \leq 9$, $1 \leq \beta \leq 5$)
- **ije** $10(\beta + 1) = \text{ijema}$ 10β ($1 \leq \beta \leq 5$)
- γ **daemita moeto** $= 60 + \gamma$ ($1 \leq \gamma \leq 59$)
- **moeto** δ [**ma** γ **ka** $(\delta + 1)$] $= 60\delta [+ \gamma]$ ($1 \leq \gamma \leq 59$, $2 \leq \delta \leq 5$)

(a)	moeto waroewo	480
	ijema joka rati	39
	moeto wido ma benomi ka wi	186
(b)	1 ena	
	19 ijema rati = ije mepina	
	26 benomima mepina	
	104 wima mepija daemita moeto	
	292 moeto wi ma wijama rati beo ka idibi	

Problem 2.

- -ya collectivity: **homa-** ‘juniper leaf’ + -ya → **homa-ya-** ‘juniper branch’
- N-:-N (N = noun):
ha- ‘leaves’ + **k’yawe** ‘water’ → **ha-:-k’yawe** ‘tea’
- N-:-A (A = adjective):
mu- ‘bread’ + **chikwa** ‘sweet (adj.)’ → **mu-:-chikwa** ‘chocolate bar’
- | | | |
|-------------------|----------|-------------------|
| | singular | plural, substance |
| monosyllabic stem | -’le | -we |
| polysyllabic stem | -nne | -:we |

- (a) 1. **mo:chikwa datda:we** — I. *peach trees*
2. **haya:we** — G. lit. *piles of leaves* (actually *planted fields /fields of plants/*)
3. **doko:ko mo’le** — H. *chicken egg*
4. **ma:chikwa** — C. *sugar*
5. **mu:chikwa** — J. *chocolate bar*
6. **mulonne, mu’le** — D. *loaf of bread*
7. **mowe** — E. *beads*
8. **ha:k’yawe** — B. *tea*
9. **doko:ko shiwe** — A. *chicken meat*
10. **mo:chikwa mulo:chikwa** — F. *peach pie*

- (b) 11. **ade muwe** — O. *blood clots*
 12. **beyanne** — P. *field of grass*
 13. **homa:we** — M. *juniper leaves*
 14. **ma:k'yawe** — N. *salt water*
 15. **ma:k'ose** — S. *salt*
 16. **ma'le** — K. *granule, grain*
 17. **homayanne** — R. *juniper branch*
 18. **mi'le** — L. *ear of corn [corn cob]*
 19. **ade k'yawe** — Q. *blood*
- (c) 20. **be'le** — *blade of grass*
 21. **chikwa** — *sweet (adj.)*
 22. **datdanne** — *tree*
 23. **ade = ade k'yawe** — *blood*
 24. **mulo:we** — *bread*
 25. **hawe** — *leaves*
- (d) 26. *salty* — **k'ose**
 27. *juniper leaf* — **homanne**
 28. *piece of meat* — **shi'le**
 29. *water* — **k'yawe**
 30. *corn, maize* — **miwe**
 31. *fields of grass* — **beya:we**
- (e) *salt lake.*

Problem 3.

- Word order:
 - V(O)S (V = verb; O = object; S = subject)
 - QVX (Q = interrogative element)
 - (*which* | *Qt*)N(D)(A) (*Qt* = quantity, N = noun, D = demonstrative pronouns, A = adjective)
- verb:
 - **le-** past
 - **bi-** future
 - **-si** subject = plural (-**gisi-si** > -**gisesi**)
- noun:
 - | | singular | plural |
|------------------|----------------|------------------|
| <i>man</i> | tau | tauwau |
| <i>child</i> | gwadi | gugwadi |
| <i>chief</i> | guyau | gweguyau |
| <i>old woman</i> | numwaya | nunumwaya |
| ~ | singular | = plural |
- class (Cl):
 - men: **te-** (before *Qt*); **to-**
 - women/animals: **na-**
 - children: **gudi-**
 - canoes: **ke-**
 - things (for example stones): **kwe-**
- demonstrative pronouns: (**a-**)**ma-Cl(-si)(-we)-na**, **ma-to-** > **mto-**, **ma-na-** > **mina-**
- quantity: Cl-**vila** *how many?*, Cl-**tala** 1, Cl-**yu** 2, Cl-**vasi** 4