

## 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
- $\alpha$ -**ma**  $10\beta = 10\beta + \alpha$  ( $1 \leq \alpha \leq 9$ ,  $1 \leq \beta \leq 5$ )
- **ije**  $10(\beta + 1) = \mathbf{ijema}$   $10\beta$  ( $1 \leq \beta \leq 5$ )
- $\gamma$  **daemita moeto**  $= 60 + \gamma$  ( $1 \leq \gamma \leq 59$ )
- **moeto**  $\delta$  [**ma**  $\gamma$  **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**  $\rightarrow$  **homa-ya-** ‘juniper branch’
- **N-:-N** (N = noun):  
**ha-** ‘leaves’ + **k’yawe** ‘water’  $\rightarrow$  **ha-:-k’yawe** ‘tea’
- **N-:-A** (A = adjective):  
**mu-** ‘bread’ + **chikwa** ‘sweet (adj.)’  $\rightarrow$  **mu-:-chikwa** ‘chocolate bar’

	singular	plural, substance
monosyllabic stem	<b>-’le</b>	<b>-we</b>
polysyllabic stem	<b>-nne</b>	<b>-:we</b>

- (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>	<b>tau</b>	<b>tauwau</b>
<i>child</i>	<b>gwadi</b>	<b>gugwadi</b>
<i>chief</i>	<b>guyau</b>	<b>gweguyau</b>
<i>old woman</i>	<b>numwaya</b>	<b>nunumwaya</b>
~	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-** > **mt-**, **ma-na-** > **mina-**
- quantity: Cl-**vila** *how many?*, Cl-**tala** 1, Cl-**yu** 2, Cl-**vasi** 4