

# Eighth International Olympiad in Linguistics

Stockholm (Sweden), 19–24 July 2010

## Individual Contest Solutions

### Problem #1. Rules:

- form 1: **-mV-** after the first vowel, whereby **V** depends on the vowel in the following syllable (**a** before **a**, **o** before **o** or **u**, **e** before **i**, **ö** before **ü**);
- form 2:
  - **-a**, if the stem ends in **-aR** or **-oR**,
  - **-Ra**, if the stem ends in **-i**, **-u** or **-ü**,

where **R** is **l** or **n** if one of these consonants is found in the root, or **r** otherwise;

- form 3: form 2 with **-r-** after the first vowel, unless **R** follows immediately.

Answers:

form 1	form 2	form 3
<i>ḥamerki</i>	<i>ḥarkira</i>	
<i>jömölkü</i>	<i>jölküla</i>	<i>jölküla</i>
<i>qamalqal</i>	<i>qalqala</i>	
<i>qumoroopu</i>	<i>quroopura</i>	<i>quroopura</i>
<i>somonxon</i>	<i>sonxona</i>	<i>sonxona</i>

form 1	form 2	form 3
<i>amolqol</i>	<i>alqola</i>	<i>alqola</i>
<i>emensi</i>	<i>ensina</i>	
<i>ḥömörçü</i>	<i>ḥörçüra</i>	
<i>čumaraqar</i>		<i>čuraqara</i>
<i>ḥamoloqu</i>		<i>ḥaloqula</i>
<i>imankan</i>		<i>inkana</i>
<i>jemeçi</i>		<i>jerçira</i>

### Problem #2.

- 1–4: *caa* 1, *lue* 2, *köni* 3, *eke* 4;
  - 5, 10, 15:  $\beta\text{-}pi = 5\beta$  ( $1 \leq \beta \leq 3$ );
  - 6–9, 11–14, 16–19:  $\alpha\text{-}ngömen = 5 + \alpha$ ,  $\alpha\text{-}ko = 10 + \alpha$ ,  $\text{-}e\text{-}ko > \text{-}ako$   
 $\alpha\text{-}qaihana = 15 + \alpha$  ( $1 \leq \alpha \leq 4$ );
  - 20, 40, 60, 80:  $\gamma\text{-}atr = 20\gamma$  ( $1 \leq \gamma$ );  $caa\text{-}atr > caatr$ ,  $eke\text{-}atr > ekaatr$
  - 21–39, 41–59, ...:  $\Gamma\text{-}nge\Delta = \Gamma + \Delta$  ( $\Gamma = 20\gamma, 1 \leq \Delta \leq 19$ ).
- (a) *caatr nge caako*: **31**, *caatr nge caangömen*: **26**, *caatr nge caaqaihana*: **36**, *ekaatr nge ekengömen*: **89**, *köniatr nge köniko*: **73**, *köniatr nge könipi*: **75**, *köniatr nge köniqaihana*: **78**, *lueatr nge lue*: **42**, *lueatr nge luako*: **52**, *lueatr nge luepi*: **50**.
- (b) *köniatr nge eke*: **64** + *caatr nge luepi*: **30** = *ekaatr nge ekako*: **94**  
*luengömen*: **7** + *luako*: **12** = *ekeqaihana*: **19**
- (c) 21: *caatr nge caa*, 48: *lueatr nge köningömen*, 83: *ekaatr nge köni*.