

# Sixteenth International Linguistics Olympiad

Prague (Czechia), 26–30 July 2018

Individual Contest Solutions

## Problem 1.

$$\text{word} = \left\{ \begin{array}{c} \text{0 or more times} \\ \circ \circ \\ \bullet \circ \\ \bullet \end{array} \right\} \left\{ \begin{array}{c} \downarrow \\ \circ \circ \\ \bullet \circ \\ \bullet \end{array} \right\} [o], \quad \begin{array}{l} \circ = (C)V \\ \bullet = \begin{cases} (C)V: \\ (C)VC' \\ (C)V:C' \end{cases} \end{array} \quad \begin{array}{l} C, C' \text{ are consonants} \\ V \text{ is a vowel} \end{array}$$

[ifá]	<i>dog</i>	[ifó.ci]	<i>puppy</i>
[nâ:..nakí]	<i>things</i>	[sâ:.....sák.wa]	<i>goose</i>
[ak..topá]	<i>bridge</i>	[hok....takí]	<i>women</i>
[wana.yitá]	<i>to tie</i>	[awa....nayí.ta]	<i>to tie to</i>
[isis..kitó.ci]	<i>little drinking vessel</i>	[a:tami.homá]	<i>bonnet (car hood)</i>
[honan.tá:ki]	<i>men</i>	[ili . toh . taí.ta]	<i>to cross legs</i>

## Problem 2. The sentences have the following structure:

$$\left. \begin{array}{c} S \\ S \left\{ \begin{array}{ll} \text{-bə} & (S = 1\text{st person sg, 2nd person sg}) \\ \text{kəmə} & (S = 3\text{rd person sg, plural}) \end{array} \right. \begin{array}{c} \text{—} \\ O \end{array} \right\} V X \text{ne}, \end{array} \right\}$$

S: subject, O: object, V: predicate,

X:	1st > 2nd > 3rd	past	present	+	$\left\{ \begin{array}{l} 1\text{st person sg} \in \{S, O\} : \text{-r} \\ 1\text{st person pl} \in \{S, O\} : \text{-i} \\ 1\text{st} \notin \{S, O\} : \\ \quad \left\{ \begin{array}{l} 2\text{nd person sg} \in \{S, O\} : \text{-u} \\ 2\text{nd person pl} \in \{S, O\} : \text{-an} \end{array} \right. \end{array} \right.$
	S → (O)	t—?	k-		
	O ← S	t <sup>h</sup> -	r-		

- (a)
1. nɾ ʒip ku ne — *Do you<sub>sg</sub> sleep?*
  2. ati kəmə nirum lapk<sup>h</sup>i t<sup>h</sup>i ne — *Did he see us?*
  3. tarum kəmə nuʔrum c<sup>h</sup>am ran ne — *Do they know you<sub>pl</sub>?*
  4. nirum kəmə tarum lan ki ne — *Do we beat them?*
  5. nirum kəmə nɾ c<sup>h</sup>am tiʔ ne — *Did we know you<sub>sg</sub>?*
  6. nirum ka tiʔ ne — *Did we go?*
- (b)
7. *Did I beat you<sub>sg</sub>?* — ɳabə nɾ lan tɾʔ ne
  8. *Did they see me?* — tarum kəmə ɳa lapk<sup>h</sup>i t<sup>h</sup>ɾ ne
  9. *Does he know you<sub>sg</sub>?* — ati kəmə nɾ c<sup>h</sup>am ru ne
  10. *Do you<sub>pl</sub> sleep?* — nuʔrum ʒip kan ne