

Sixteenth International Linguistics Olympiad

Prague (Czechia), 26–30 July 2018

Individual Contest Solutions

Problem 1.

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

[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:

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

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

$$X: \begin{array}{|c|c|c|} \hline 1\text{st} > 2\text{nd} > 3\text{rd} & \text{past} & \text{present} \\ \hline S \rightarrow (O) & \text{t-?} & \text{k-} \\ \hline O \leftarrow S & \text{t}^h\text{-} & \text{r-} \\ \hline \end{array} + \left\{ \begin{array}{l} 1\text{st person sg} \in \{S, O\} : \text{-r} \\ 1\text{st person pl} \in \{S, O\} : \text{-i} \\ 1\text{st} \notin \{S, O\} : \\ \quad \left\{ \begin{array}{l} 2\text{nd person sg} \in \{S, O\} : \text{-u} \\ 2\text{nd person pl} \in \{S, O\} : \text{-an} \end{array} \right. \end{array} \right.$$

- (a)
1. **nɾ ʒip ku ne** — *Do you_{sg} sleep?*
 2. **ati kəmə nirum lapk^{hi} t^{hi} ne** — *Did he see us?*
 3. **tarum kəmə nuʔrum c^ham ran ne** — *Do they know you_{pl}?*
 4. **nirum kəmə tarum lan ki ne** — *Do we beat them?*
 5. **nirum kəmə nɾ c^ham tiʔ ne** — *Did we know you_{sg}?*
 6. **nirum ka tiʔ ne** — *Did we go?*
- (b)
7. *Did I beat you_{sg}?* — **ŋabə nɾ lan tɾʔ ne**
 8. *Did they see me?* — **tarum kəmə ŋa lapk^{hi} t^hɾ ne**
 9. *Does he know you_{sg}?* — **ati kəmə nɾ c^ham ru ne**
 10. *Do you_{pl} sleep?* — **nuʔrum ʒip kan ne**