

## Twelfth International Olympiad in Linguistics

Beijing (China), July 21–25, 2014

## Individual Contest Problems

Do not copy the statements of the problems. Write down your solution to each problem on a separate sheet or sheets. On each sheet indicate the number of the problem, the number of your seat and your surname. Otherwise your work may be mislaid or misattributed.

Your answers must be well-supported by argument. Even a perfectly correct answer will be given a low score unless accompanied by an explanation.

**Problem #1 (20 points).** Here are some verb forms of Benabena and their English translations:

<i>nohobe</i>	I am striking him
<i>kahalune</i>	we will strike you <sub>sg</sub>
<i>nokoho'ibe</i>	we both are striking you <sub>sg</sub>
<i>nolenufu'inagihe</i>	because we both are piercing you <sub>pl</sub>
<i>nolifi'ibe</i>	you both are piercing us
<i>nofunagihe</i>	because I am piercing him
<i>nofine</i>	you <sub>sg</sub> are piercing him
<i>nifila'ibe</i>	you both will pierce me
<i>nonahatagihe</i>	because you <sub>sg</sub> are striking me
<i>lenahalube</i>	I will strike you <sub>pl</sub>
<i>nahalanagihe</i>	because you <sub>pl</sub> will strike me
<i>lahala'ibe</i>	you both will strike us
<i>nofutagihe</i>	because we are piercing him
<i>lenifilu'ibe</i>	we both will pierce you <sub>pl</sub>
<i>noho'inagihe</i>	because we both are striking him

(a) Translate into English:

*nonifibe, halu'ibe, lifilatagihe, nokufune, nolahanagihe.*

(b) Translate into Benabena:

- you both are striking him;
- we will pierce you<sub>sg</sub>;
- because we are striking you<sub>pl</sub>;
- because you<sub>pl</sub> will pierce him.

⚠ The Benabena language belongs to the Trans-New Guinea family. It is spoken by approx. 45,000 people in Papua New Guinea. —Ivan Derzhanski

**Problem #2 (20 points).** Here are the singular, dual and plural forms of some Kiowa nouns and their English translations. Not all forms are given, although all exist.

singular	dual	plural	
<b>adɔ</b>	<b>a</b>	<b>a</b>	tree
<b>mat<sup>h</sup>ɔnsjan</b>	<b>mat<sup>h</sup>ɔnsjan</b>	<b>mat<sup>h</sup>ɔnsjado</b>	little girl
<b>k'ɔ</b>	<b>k'ɔ</b>	<b>k'ɔgɔ</b>	knife
<b>t<sup>h</sup>ot'olagɔ</b>	<b>t<sup>h</sup>ot'ola</b>	<b>t<sup>h</sup>ot'olagɔ</b>	orange
<b>aufi</b>		<b>aufigɔ</b>	fish
<b>p<sup>h</sup>jaboado</b>		<b>p<sup>h</sup>jaboa</b>	street lamp
<b>mat<sup>h</sup>ɔn</b>		<b>mat<sup>h</sup>ɔdo</b>	girl
<b>k'ɔnbohodo</b>		<b>k'ɔnbohon</b>	hat
<b>t'ɔ</b>		<b>t'ɔgɔ</b>	spoon
		<b>e</b>	bread
<b>alɔsɔhjegɔ</b>	?	<b>alɔsɔhjegɔ</b>	plum
?	<b>tsegun</b>	<b>tsegudo</b>	dog
<b>alɔguk'ogɔ</b>	<b>alɔguk'o</b>	?	lemon
?	<b>k'ap<sup>h</sup>t<sup>h</sup>ɔ</b>	<b>k'ap<sup>h</sup>t<sup>h</sup>ɔgɔ</b>	old man
<b>k<sup>h</sup>ɔdo</b>	<b>k<sup>h</sup>ɔ</b>	?	blanket
<b>k'ɔdo</b>	?	<b>k'ɔdo</b>	tomato
?	<b>alɔ</b>	?	apple
?	<b>p<sup>h</sup>ɔ</b>	?	buffalo
?	?	<b>sado</b>	child
<b>ɔlsun</b>	?	?	comb
?	<b>pitso</b>	?	fork
?	<b>t<sup>h</sup>ɔp<sup>h</sup>paa</b>	?	chair

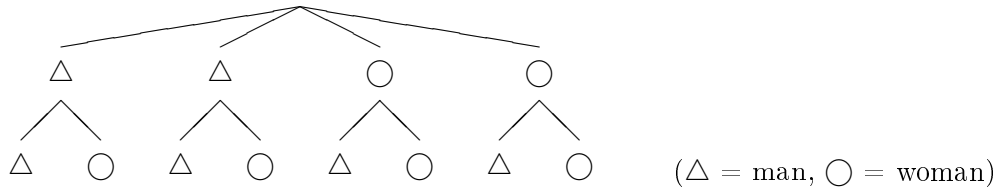
Fill in the cells with the question marks.

⚠ The Kiowa language belongs to the Kiowa–Tanoan family. It is an endangered language, only spoken by a few hundred people in Oklahoma, USA.

The Kiowa words are given in a simplified transcription. **k'**, **t'**, **p'**, **k<sup>h</sup>**, **p<sup>h</sup>**, **t<sup>h</sup>** are consonants; **ɔ** is a vowel.

—Aleksejs Peguševs

**Problem #3 (20 points).** Once upon a time in the Tangut Empire (“the Great State of the White and the Lofty”) there lived two brothers and two sisters. They each had a son and a daughter.



Below you see statements in the Tangut language concerning the relations between these people. The name **Lhie<sup>2</sup>nyn<sup>2</sup>** belongs to a man.

- |   |  |
|---|--|
| 1. Ldiu <sup>2</sup> še <sup>1</sup> Nie <sup>2</sup> tse <sup>1</sup> 'yn <sup>1</sup> kâj <sup>1</sup> ngu <sup>2</sup> .     | 19. Lhie <sup>2</sup> nyn <sup>2</sup> Wa <sup>2</sup> nie <sup>1</sup> 'yn <sup>1</sup> wia <sup>1</sup> ngu <sup>2</sup> .   |
| 2. Lhie <sup>2</sup> nyn <sup>2</sup> Ngwi <sup>1</sup> mbyn <sup>2</sup> 'yn <sup>1</sup> lio <sup>2</sup> ngu <sup>2</sup> .  | 20. Ldiu <sup>2</sup> še <sup>1</sup> Sei <sup>1</sup> na <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .   |
| 3. Sei <sup>1</sup> na <sup>1</sup> Wa <sup>2</sup> nie <sup>1</sup> 'yn <sup>1</sup> ndon <sup>1</sup> ngu <sup>2</sup> .      | 21. Wa <sup>2</sup> nie <sup>1</sup> Sei <sup>1</sup> na <sup>1</sup> 'yn <sup>1</sup> mu <sup>1</sup> ngu <sup>2</sup> .      |
| 4. Ldiu <sup>2</sup> še <sup>1</sup> Śan <sup>1</sup> nia <sup>1</sup> 'yn <sup>1</sup> ndon <sup>1</sup> ngu <sup>2</sup> .    | 22. Śan <sup>1</sup> nia <sup>1</sup> Wa <sup>2</sup> nie <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .   |
| 5. Śan <sup>1</sup> nia <sup>1</sup> Syn <sup>1</sup> mei <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .    | 23. Ngon <sup>2</sup> ngwe <sup>1</sup> Ldiu <sup>2</sup> še <sup>1</sup> 'yn <sup>1</sup> la <sup>2</sup> ngu <sup>2</sup> .  |
| 6. Ldiu <sup>2</sup> še <sup>1</sup> Syn <sup>1</sup> mei <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .    | 24. Lhie <sup>2</sup> nyn <sup>2</sup> Mbe <sup>2</sup> phon <sup>1</sup> 'yn <sup>1</sup> mu <sup>1</sup> ngu <sup>2</sup> .  |
| 7. Ldiu <sup>2</sup> še <sup>1</sup> Wa <sup>2</sup> nie <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .     | 25. Mbe <sup>2</sup> phon <sup>1</sup> Ldiu <sup>2</sup> še <sup>1</sup> 'yn <sup>1</sup> ma <sup>1</sup> ngu <sup>2</sup> .   |
| 8. Kei <sup>1</sup> zey <sup>2</sup> Ldiu <sup>2</sup> še <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .    | 26. Lhie <sup>2</sup> nyn <sup>2</sup> Nie <sup>2</sup> tse <sup>1</sup> 'yn <sup>1</sup> 'iə <sup>1</sup> ngu <sup>2</sup> .  |
| 9. Ldiu <sup>2</sup> še <sup>1</sup> Kei <sup>1</sup> zey <sup>2</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .    | 27. Lhie <sup>2</sup> nyn <sup>2</sup> Ngon <sup>2</sup> ngwe <sup>1</sup> 'yn <sup>1</sup> mu <sup>1</sup> ngu <sup>2</sup> . |
| 10. Lhie <sup>2</sup> nyn <sup>2</sup> Syn <sup>1</sup> mei <sup>1</sup> 'yn <sup>1</sup> wia <sup>1</sup> ngu <sup>2</sup> .   | 28. Śan <sup>1</sup> nia <sup>1</sup> Sie <sup>1</sup> tsie <sup>1</sup> 'yn <sup>1</sup> lio <sup>2</sup> ngu <sup>2</sup> .  |
| 11. Lhie <sup>2</sup> nyn <sup>2</sup> Sie <sup>1</sup> tsie <sup>1</sup> 'yn <sup>1</sup> 'iə <sup>1</sup> ngu <sup>2</sup> .  | 29. Lhie <sup>2</sup> nyn <sup>2</sup> Ldiu <sup>2</sup> še <sup>1</sup> 'yn <sup>1</sup> 'iə <sup>1</sup> ngu <sup>2</sup> .  |
| 12. Kei <sup>1</sup> zey <sup>2</sup> Wa <sup>2</sup> nie <sup>1</sup> 'yn <sup>1</sup> lio <sup>2</sup> ngu <sup>2</sup> .     | 30. Lhie <sup>2</sup> nyn <sup>2</sup> Sei <sup>1</sup> na <sup>1</sup> 'yn <sup>1</sup> wiej <sup>2</sup> ngu <sup>2</sup> .  |
| 13. Kei <sup>1</sup> zey <sup>2</sup> Sie <sup>1</sup> tsie <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .  | 31. Śan <sup>1</sup> nia <sup>1</sup> Nie <sup>2</sup> tse <sup>1</sup> 'yn <sup>1</sup> mu <sup>1</sup> ngu <sup>2</sup> .    |
| 14. Lhie <sup>2</sup> nyn <sup>2</sup> Kei <sup>1</sup> zey <sup>2</sup> 'yn <sup>1</sup> wiej <sup>2</sup> ngu <sup>2</sup> .  | 32. Lhie <sup>2</sup> nyn <sup>2</sup> Śan <sup>1</sup> nia <sup>1</sup> 'yn <sup>1</sup> 'iə <sup>1</sup> ngu <sup>2</sup> .  |
| 15. Syn <sup>1</sup> mei <sup>1</sup> Nie <sup>2</sup> tse <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .   | 33. Ngon <sup>2</sup> ngwe <sup>1</sup> Kei <sup>1</sup> zey <sup>2</sup> 'yn <sup>1</sup> ny <sup>1</sup> ngu <sup>2</sup> .  |
| 16. Ngon <sup>2</sup> ngwe <sup>1</sup> Mbe <sup>2</sup> phon <sup>1</sup> 'yn <sup>1</sup> kâj <sup>1</sup> ngu <sup>2</sup> . | 34. Syn <sup>1</sup> mei <sup>1</sup> Śan <sup>1</sup> nia <sup>1</sup> 'yn <sup>1</sup> zwej <sup>1</sup> ngu <sup>2</sup> .  |
| 17. Syn <sup>1</sup> mei <sup>1</sup> Sei <sup>1</sup> na <sup>1</sup> 'yn <sup>1</sup> kâj <sup>1</sup> ngu <sup>2</sup> .     | 35. Mbe <sup>2</sup> phon <sup>1</sup> Sie <sup>1</sup> tsie <sup>1</sup> 'yn <sup>1</sup> ma <sup>1</sup> ngu <sup>2</sup> .  |
| 18. Ldiu <sup>2</sup> še <sup>1</sup> Sie <sup>1</sup> tsie <sup>1</sup> 'yn <sup>1</sup> ndon <sup>1</sup> ngu <sup>2</sup> .  | 36. Nie <sup>2</sup> tse <sup>1</sup> Sie <sup>1</sup> tsie <sup>1</sup> 'yn <sup>1</sup> ____ ngu <sup>2</sup> .              |

(a) Reconstruct the family tree.

(b) Fill in the blank in the last sentence (there is only one way to do this).

⚠ Tangut is an extinct language of the Tibeto-Burman family that was spoken in the Tangut Empire (1038–1227, present-day central China). There is no agreement among scholars on what it sounded like, therefore the transcription is based on one of the reconstructions. The superscript numbers indicate its two tones (<sup>1</sup> = flat, <sup>2</sup> = rising); in particular, the words for ‘father’ and ‘mother’ are in the first tone. **â, ê, ɛ, ɔ, y, ə** are vowels; **ś, ź, ’** are consonants.

—Ivan Derzhanski

**Problem #4 (20 points).** Here are some short dialogs in Engenni and their English translations:

1. *edèi âno nwâsesè ozyí lelemù à? edèi ânò wei ga òkí nwâsese ozyí lelemù.*  
Will this man frighten the deceived thief?  
This man said that he<sub>this man</sub> would not frighten the deceived thief.
2. *avùrànmù kìnono amemùrè ânò à? avùrànmù wei ga òkí kìnono amemùrè ânò.*  
Did the woman resemble this girl?  
The woman said that she<sub>the woman</sub> did resemble this girl.
3. *amó lelemù ânó wuese avùrànmù à? amodhyòmù wei ga ò wuese avùrànmù.*  
Did this deceived child not kill the woman?  
The youth said that he<sub>this deceived child</sub> did kill the woman.
4. *edèi dhia gbúnònò amò à? avùrànmù kofilomù wei ga o gbúnònò amò.*  
Will the evil man heal the child?  
The coughing woman said that he<sub>the evil man</sub> would heal the child.
5. *amemùré dhíá kìnono opilopo ânò à? avùrànmù wei ga ó kìnono opilopo ânò.*  
Did the evil girl not resemble this pig?  
The woman said that she<sub>the evil girl</sub> did not resemble this pig.
6. *ozyi gbunono okàá nùamù ânò à? ozyi wei ga òkí gbunono okàá nùamù ânò.*  
Did the thief heal this beaten old man?  
The thief said that he<sub>the thief</sub> did not heal this beaten old man.
7. *ozyi âno kúnònò edèi kofilomù à? amò ânò wei ga ó kìnono edèi kofilomù.*  
Will this thief resemble the coughing man?  
This child said that he<sub>this thief</sub> would not resemble the coughing man.

(a) Translate into English:

8. *edèi ânò nwâsese ozyi à? amemùrè wei ga ò nwâsese ozyi.*
9. *amemùré lelemu wúesè amodhyòmù ânò à?  
amemùré lelemù wei ga òkí wúesè amodhyòmù ânò.*

Here is also an answer in Engenni without a question for it:

10. *ozyi ânò wei ga amó gbunono edèi.*

Translate it into English. If it can be translated in more than one way, provide all translations and explain your reasoning.

(b) Translate into Engenni:

11. Will the old man resemble this coughing youth?  
The child said that he<sub>the old man</sub> would not resemble this coughing youth.
12. Did this beaten woman not frighten the man?  
This beaten woman said that she<sub>this beaten woman</sub> did not frighten the man.

(c) If you were to compile an Engenni dictionary, what would the base forms of the words ‘thief’ and ‘girl’ be? Explain your answer.

△ The Engenni language belongs to the Benue–Congo family. It is spoken by approx. 20,000 people in Nigeria.

The mark  $\cdot$  underneath a word's first vowel indicates that all of the word's vowels are pronounced with a slightly lowered tongue. The marks  $\acute{\phantom{a}}$ ,  $\grave{\phantom{a}}$  and  $\hat{\phantom{a}}$  indicate high, low, and falling tone, respectively; if none is present, the syllable has middle tone.

—*Artūrs Semeņuks*

**Problem #5 (20 points).** Here are some words and word combinations in Northwest Gbaya and their English translations in arbitrary order:

**ʔáá, ʔáá náng nú kò, ʔáá sèè, búmá yík, búmá zù yík, dáng gòk, dí fò, dí sèè,  
kò yík, kò zòk, náng wí, nú fò, nú lébé, sèè wí, yík, yík wí, zù**

at the surface; eye socket; eyebrow; eyelash; eyes/face;  
field edge; foot; happiness; liver; good field; nostril;  
above, on; poisonous snake; tip of the tongue;  
to be dying; to envy; to put

- (a) Determine the correct correspondences.
- (b) Translate into English: **búmá zù, kò, lébé gòk, lébé wí.**
- (c) Translate into Northwest Gbaya: at the center; head; displeasure; nose.

△ The Northwest Gbaya language belongs to the Ubangian family. It is spoken by approx. 200,000 people in the Central African Republic.

The Northwest Gbaya words are given in a simplified transcription. ʔ is a consonant.

—*Boris Iomdin*

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Good luck!