

en(A)

## 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.

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**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>leniflu'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, liflatagihe, 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	
adɔ	a	a	tree
mat <sup>h</sup> ɔnsjan	mat <sup>h</sup> ɔnsjan	mat <sup>h</sup> ɔnsjadɔ	little girl
k'ɔ	k'ɔ	k'ɔgɔ	knife
t <sup>h</sup> ot'olagɔ	t <sup>h</sup> ot'ola	t <sup>h</sup> ot'olagɔ	orange
aufi		aufigɔ	fish
p <sup>h</sup> jaboards		p <sup>h</sup> jaboa	street lamp
mat <sup>h</sup> ɔn		mat <sup>h</sup> ɔdɔ	girl
k'ɔnbohodɔ		k'ɔnbohon	hat
t'ɔ		t'ɔgɔ	spoon
		e	bread
alɔsɔhjegɔ	?	alɔsɔhjegɔ	plum
?	tsegun	tsegudsɔ	dog
alɔguk'ogɔ	alɔguk'o	?	lemon
?	k'ap <sup>h</sup> t <sup>h</sup> ɔ	k'ap <sup>h</sup> t <sup>h</sup> ɔgɔ	old man
k <sup>h</sup> ɔdɔ	k <sup>h</sup> ɔ	?	blanket
k'ɔdɔ	?	k'ɔdɔ	tomato
?	alɔ	?	apple
?	p <sup>h</sup> ɔ	?	buffalo
?	?	sadɔ	child
ɔlsun	?	?	comb
?	pitso	?	fork
?	t <sup>h</sup> ɔp <sup>h</sup> paa	?	chair

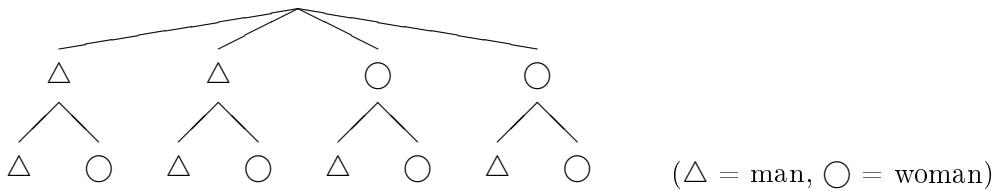
Fill in the cells with the question marks.

⚠ 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> tsę <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> Šan <sup>1</sup> nia <sup>1</sup> 'yn <sup>1</sup> ndon <sup>1</sup> ngu <sup>2</sup> .    | 22. Šan <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. Šan <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> tsę <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. Šan <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. Šan <sup>1</sup> nia <sup>1</sup> Nie <sup>2</sup> tsę <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> Šan <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> tsę <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> Šan <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> tsę <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. ă, ê, e, o, y, ə are vowels; š, ž, ' are consonants.

—Ivan Derzhanski

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

1. *edèì âno nwásesè ozyí lèlemù à? edèì ânò wei ga òkí nwásese ozyí lèlemù.*  
Will this man frighten the deceived thief?  
This man said that he<sub>this man</sub> would not frighten the deceived thief.
2. *avùràmù kinono amemùrè ânò à? avùràmù wei ga òki kinono amemùrè ânò.*  
Did the woman resemble this girl?  
The woman said that she<sub>the woman</sub> did resemble this girl.
3. *amó lèlemù ânó wuese avùràmù à? amodhyòmù wei ga ò wuese avùràmù.*  
Did this deceived child not kill the woman?  
The youth said that he<sub>this deceived child</sub> did kill the woman.
4. *edèí dhia gbúnonò amò à? avùràmú kofilomù wei ga o gbúnonò amò.*  
Will the evil man heal the child?  
The coughing woman said that he<sub>the evil man</sub> would heal the child.
5. *amemùrè dhiá kinono opilopo ânò à? avùràmù wei ga ó kinono 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. *ozyì gbunono okàá nuamù ânò à? ozyì wei ga òkí gbunono okàá nuamù 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. *ozyì âno kínonò edèí kofilomù à? amò ânò wei ga ó kinono edèí 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. *edèì ânò nwásese ozyi à? amemùrè wei ga ò nwásese ozyi.*
9. *amemùrè lèlemu wúesè amodhyòmù ânò à?*  
*amemùrè lèlemù wei ga òki wúesè amodhyòmù ânò.*

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

10. *ozyì ânò wei ga amó gbunono edèì.*

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 . underneath a word's first vowel indicates that all of the word's vowels are pronounced with a slightly lowered tongue. The marks ', ` and ^ 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:

?áá, ?áá náng nú kò, ?áá sèè, búmá yík, búmá zù yík, dágng gòk, dí fò, dí sèè,  
kò yík, kò zòk, náng wí, nú fò, nú lébé, sèè wí, 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. ? is a consonant.

—Boris Iomdin

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Good luck!