

# First Asia Pacific Linguistics Olympiad

May 5, 2019

## Problems

- Listen carefully to the invigilators and follow their instructions.
- The contest lasts five hours. The problem set consists of seven pages and it contains five problems. You may solve the problems in any order.
- You are not allowed to use any electronic device, written or printed material or other external sources of information during the contest.
- If you have a question about any of the problems, put up your hand and ask an invigilator. The invigilator will consult with the jury before answering.
- Rules for writing out solutions
  - Do not copy the statements of the problems.
  - Write down your solution to each problem on a separate sheet or sheets.
  - Use only the front side of the answer sheet.
  - On each sheet indicate your name, the number of the problem, and the page sequence of that sheet within the problem, e.g.:

Name	...
Problem #	5
Page #	1 / 3

Name	...
Problem #	5
Page #	2 / 3

Name	...
Problem #	5
Page #	3 / 3

(meaning first, second, and third sheet of three for the fifth problem.)

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).** The following are the fourth powers of natural numbers in ascending order:

1, 16, 81, 256, 625, 1296, 2401, 4096, 6561, 10000, . . .

The first ten entries of this sequence are spelt out in Ik, in arbitrary order:

- a. **ɲamɪrá lebetse ńda tomínékwa túde ńda jírɪnɪ túde ńda kɪdɪ kɔn**
- b. **álifika ts'agúsé ńda tomínékwa túde ńda kɪdɪ ts'agúsé ńda jírɪnɪ túde ńda kɪdɪ kɔn**
- c. **álifika túde ńda kɪdɪ kɔn ńda ɲamɪrá túde ńda tomínékwa túde ńda kɪdɪ kɔn ńda nébɛɛ kɔn**
- d. **álifika tomín**
- e. **álifa kɔn ńda ɲamɪrá lebetse ńda tomínékwa túde ńda kɪdɪ ts'agúsé ńda jírɪnɪ túde ńda kɪdɪ kɔn**
- f. **tomínékwa túde ńda kɪdɪ aɖe ńda nébɛɛ kɔn**
- g. **tomíní ńda jírɪnɪ túde ńda kɪdɪ kɔn**
- h. **kɔn**
- i. **álifika lebetse ńda ɲamɪrá ts'agúsé ńda kɔn**
- j. **ɲamɪrá túde ńda kɪdɪ kɔn ńda tomínékwa lebetse ńda jírɪnɪ túd**

(a) Determine the correct correspondence.

(b) Write in numerals:

- k. **álifika tomíní ńda jírɪnɪ lebetse**
- l. **tomínékwa túde ńda kɪdɪ kɔn**
- m. **tomínékwa túde ńda nébɛɛ kɔn**
- n. **álifika ɲamɪrá kɔn**

(c) Write out in Ik: 3108.

(d) Write out the eleventh entry of the sequence in Ik.

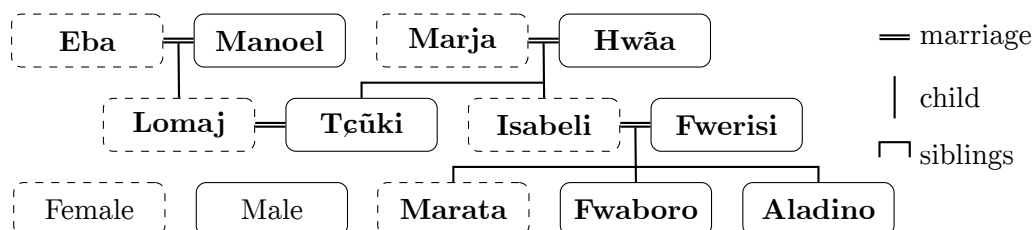
△ Ik belongs to the Nilo-Saharan family. It is spoken by approx. 7,500 people in Uganda.

**ɓ**, **ɗ**, **j**, **ɲ** and **ts'** are consonants. **ɔ**, **ɛ** and **ɪ** are pronounced like **o**, **e** and **i**, respectively, but with the slightly lowered tongue. The mark ´ denotes a high tone.

The fourth power of a number  $n$  is the result of multiplying four instances of  $n$  together.  
( $n^4 = n \times n \times n \times n$ )

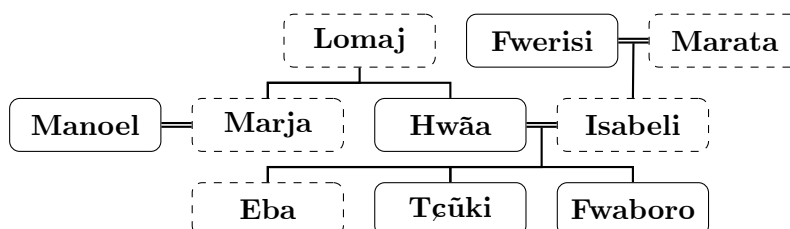
—Minkyu Kim

**Problem 2 (20 points).** Here is a family tree of an Urarina family. Given below are some sentences in Urarina and their English translations.



Speaker	Listener	Urarina	English translation
Aladino	Fwaboro	<b>Kati takai</b>	<i>You(sg) met the dark capuchin monkey.</i>
Eba	Marja	<b>Ta kabesiine</b>	<i>Hadn't you(sg) finished telling (it) to me?</i>
Fwaboro	Isabeli	<b>Katiatçena</b>	<i>Did he/she give (it) to me?</i>
Fwerisi	Fwaboro	<b>Ibahahia eene</b>	<i>The woman was asking you(sg).</i>
Fwerisi	Hwãa	<b>Arisiitçe</b>	<i>You(sg) had finished looking for him/her.</i>
Isabeli	Tçũki	<b>Bahaitçe</b>	<i>You(sg) asked him/her.</i>
Lomaj	Fwerisi	<b>Katakasiatçe</b>	<i>He/She had finished meeting me.</i>
Lomaj	Eba	<b>Kuretiahei</b>	<i>You(sg) were buying it.</i>
Manoel	Hwãa	<b>Ta esenetaane</b>	<i>Didn't he/she believe him/her?</i>
Manoel	Tçũki	<b>Djesenetaatçe</b>	<i>He/She believed you(sg).</i>
Manoel	Lomaj	<b>Kabesiatçe</b>	<i>He/She had finished telling (it) to me.</i>
Marata	Lomaj	<b>Dzariahia katça</b>	<i>The man was looking for you(sg).</i>
Marata	Fwerisi	<b>Kesenetaitçe</b>	<i>You(sg) believed me.</i>
Marja	Isabeli	<b>Kuretesia etoe</b>	<i>The owl monkey had finished buying it.</i>
Tçũki	Hwãa	<b>Itakahia</b>	<i>He/She was meeting you(sg).</i>

A new family tree is provided. Fill in the blanks. Provide all possible answers for blanks 4–6.



Speaker	Listener	Urarina	English translation
Eba	Fwerisi	<b>Kabiatçe kati</b>	1 _____
Hwãa	Eba	<b>Eene takahiatçena etoe</b>	2 _____
Lomaj	Marata	<b>Ta katça arisiane</b>	3 _____
Marja	4 _____	<b>Ta itiatçene eene</b>	<i>Didn't the woman give (it) to you(sg)?</i>
Eba	5 _____	<b>Etoe bahaa katça</b>	<i>The man asked the owl monkey.</i>
Hwãa	6 _____	<b>Kabesiana</b>	<i>Had he/she finished telling (it) to me?</i>
Fwaboro	Isabeli	7 _____	<i>Was he/she buying the owl monkey?</i>
Hwãa	Marata	8 _____	<i>The dark capuchin monkey believed you(sg).</i>
Fwerisi	Hwãa	9 _____	<i>He/She was looking for the man.</i>
Fwaboro	Fwerisi	10 _____	<i>Did he/she tell (it) to you(sg)?</i>

△ Urarina is a language isolate. It is spoken by approx. 3,000 people in north-western Peru. Punctuation is omitted in the Urarina data. **tɕ** and **dʒ** are consonants.

Urarina people practice bride service and uxorilocality, i.e. the couple would live near the wife's family after marriage.

All family members in this problem are above 15 of age and are regarded as adults according to traditions.

—Yung-Jui Yao

**Problem 3 (20 points).** Here are some sentences in Mee and their possible English translations:

- |                          |  |
|--------------------------|--|
| 1. <i>yanameege</i>      | <i>You(sg) brought me for him today.</i> |
| 2. <i>nakadoogi</i>      | <i>He saw you(sg) for me today.</i>      |
| 3. <i>teenedoogi</i>     | <i>He did not see us today.</i>          |
| 4. <i>niyanedoope</i>    | <i>You(sg) saw us for us.</i>            |
| 5. <i>ebukaipa</i>       | <i>I saved them.</i>                     |
| 6. <i>meege</i>          | <i>You(sg) came today.</i>               |
| 7. <i>kaaaakadoope</i>   | <i>We two met for you(sg).</i>           |
| 8. <i>naakawageegai</i>  | <i>They fought for me today.</i>         |
| 9. <i>aanabukaipaa</i>   | <i>You two saved me.</i>                 |
| 10. <i>teekameege</i>    | <i>We did not bring you(sg) today.</i>   |
| 11. <i>teedokaibe</i>    | <i>You(sg) did not carry him.</i>        |
| 12. <i>teekiyaameepe</i> | <i>We two did not come for you(pl).</i>  |

(a) Translate into English:

13. *aameepai*
14. *teekedoogi*
15. *naaameegaa*
16. *teenadokaipaa*

(b) Translate into Mee:

17. *You(sg) saw them today.*
18. *I did not come for him today.*
19. *You two saw him for us.*
20. *They saved each other.*

(c) These sentences can be interpreted in different ways. Give all possible translations.

21. *kameepi*
22. *edoope*

△ Mee (Ekari) belongs to the Trans–New Guinean family. It is spoken by approx. 100,000 people in Papua province, Indonesia.

—Tsuyoshi Kobayashi

**Problem 4 (20 points).** Here are some verb forms in Hebrew and their English translations in arbitrary order:

*katava, higdil, hitxatavt, hitbatel, gadalti, zakanta, higniva, hikhalta,  
kitavti, bitalt, ahava, shimarti, ginev, gadala*

- |  |   |
|--|---|
| 1. <i>I grew up.</i>                       | 8. <i>You(fem) corresponded (with someone).</i> |
| 2. <i>She loved (someone).</i>             | 9. <i>She wrote (something).</i>                |
| 3. <i>She grew up.</i>                     | 10. <i>He grew (something).</i>                 |
| 4. <i>I rewrote (something).</i>           | 11. <i>You(masc) fed (someone).</i>             |
| 5. <i>You(masc) grew old.</i>              | 12. <i>She smuggled (something).</i>            |
| 6. <i>He stole (something) repeatedly.</i> | 13. <i>He shamed himself.</i>                   |
| 7. <i>You(fem) humiliated (someone).</i>   | 14. <i>I guarded (something) firmly.</i>        |

(a) Determine the correct correspondence.

(b) Translate into English:

*zakan, katav, hitshamara, ganavt*

(c) Translate into Hebrew:

15. *I wrote (something).*
16. *You(masc) shamed (someone).*
17. *She loved (someone) back.*

△ Hebrew belongs to the Semitic branch of the Afro-Asiatic family. It is spoken by approx. 9,000,000 people all over the world. Hebrew is the official language of Israel.

$\text{ə} \approx o$  in *worm*. **kh**, **sh** and **q** are consonants.

—Aalok Sathe

**Problem 5 (20 points).** Here are some Old Turkic words written in the Old Turkic script, their Roman transcriptions and their English translations:

𐰀𐰢𐰆	adaq	<i>foot</i>
𐰇𐰏𐰢𐰆	altun	<i>gold</i>
𐰇𐰢𐰆𐰢	amtī	<i>now</i>
𐰇𐰢𐰆𐰢𐰆𐰢	ädgüti	<i>well (adv.)</i>
𐰇𐰢𐰆𐰢	bängü	<i>eternal</i>
𐰇𐰢𐰆𐰢𐰆𐰢	başlıyïy	<i>the head-bearer, the arrogant one</i>
𐰇𐰢𐰆𐰢𐰆𐰢	bilmäz	<i>he/she does not know</i>
𐰇𐰢𐰆𐰢𐰆	bodun	<i>populace</i>
𐰇𐰢𐰆𐰢𐰆	buluṇ	<i>corner</i>
𐰇𐰢𐰆𐰢𐰆	içrä	<i>inside</i>
𐰇𐰢𐰆𐰢𐰆	ičyïnu	<i>after losing</i>
𐰇𐰢𐰆𐰢𐰆𐰢	kälürtüm	<i>I brought</i>
𐰇𐰢𐰆𐰢𐰆	költä	<i>at the lake</i>
𐰇𐰢𐰆𐰢𐰆	oylan	<i>boy</i>
𐰇𐰢𐰆𐰢𐰆𐰢	oyliti	<i>their sons</i>
𐰇𐰢𐰆𐰢𐰆	olti	<i>he/she killed</i>
𐰇𐰢𐰆𐰢𐰆	qara	<i>black</i>
𐰇𐰢𐰆𐰢𐰆	qış	<i>winter</i>
𐰇𐰢𐰆𐰢𐰆	sub	<i>water</i>
𐰇𐰢𐰆𐰢𐰆	tirkış	<i>to go on in a sequence</i>
𐰇𐰢𐰆𐰢𐰆	tölis	<i>Tölis (personal name)</i>
𐰇𐰢𐰆𐰢𐰆	uluṇ	<i>great</i>
𐰇𐰢𐰆𐰢𐰆	ümüzsän	<i>you will not think</i>
𐰇𐰢𐰆𐰢𐰆	yazı	<i>plains, field</i>
𐰇𐰢𐰆𐰢𐰆	yügürti	<i>it flowed</i>

(a) Write out in the Old Turkic script:

1. \_\_\_\_\_ **ärän** *men*
2. \_\_\_\_\_ **bīčdī** *he/she cut*
3. \_\_\_\_\_ **könül** *heart*
4. \_\_\_\_\_ **otuz** *thirty*
5. \_\_\_\_\_ **qayan** *khagan*
6. \_\_\_\_\_ **tizligig** *the knee-bearer, the mighty one*

(b) Provide all possible Roman transcriptions of the following word:

𐰽𐰺𐰍𐰏

(c) Describe the spelling rules of the Old Turkic script.

△ Old Turkic is the earliest attested member of the Turkic language family, found in Göktürk and Uyghur inscriptions dating from the 7th to the 13th century. Old Turkic is attested in various writing systems including the Old Turkic script, which was in use from the 8th to the 10th century.

ä ≈ e in *pet*. ĩ is pronounced somewhat like *u* in *put*, but without rounding the lips. ö and ü are pronounced as those of German (or *eu* and *u* of French), which correspond to ä and i with rounded lips, respectively. q and ɣ are pronounced like k and g, respectively, but further back in the mouth. č, š and ŋ are consonants.

A khagan is an imperial ruler of some Turkic and Mongolic tribes. —Jaeyeong Yang

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Good luck!