

en

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. ɳamriá lebetse ñda tomínékwa túde ñda jirimí túde ñda kidi kɔn
- b. álifika ts'agúsé ñda tomínékwa túde ñda kidi ts'agúsé ñda jirimí túde ñda kidi kɔn
- c. álifika túde ñda kidi kɔn ñda ɳamriá túde ñda tomínékwa túde ñda kidi kɔn ñda nēbeε kɔn
- d. álifika tomín
- e. álifa kɔn ñda ɳamriá lebetse ñda tomínékwa túde ñda kidi ts'agúsé ñda jirimí túde ñda kidi kɔn
- f. tomínékwa túde ñda kidi ade ñda nēbeε kɔn
- g. tomíní ñda jirimí túde ñda kidi kɔn
- h. kɔn
- i. álifika lebetse ñda ɳamriá ts'agúsé ñda kɔn
- j. ɳamriá túde ñda kidi kɔn ñda tomínékwa lebetse ñda jirimí túd

(a) Determine the correct correspondence.

(b) Write in numerals:

- k. álifika tomíní ñda jirimí lebets
- l. tomínékwa túde ñda kidi kɔn
- m. tomínékwa túde ñda nēbeε kɔn
- n. álifika ɳamriá kɔn

(c) Write out in Ik: 3108.

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

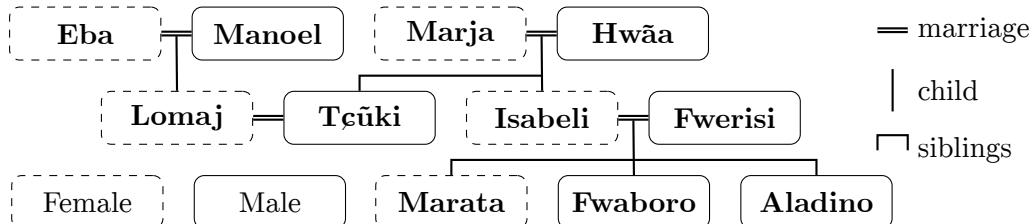
⚠️ Ik belongs to the Nilo-Saharan family. It is spoken by approx. 7,500 people in Uganda.

ɓ, d, j, ɳ and ts' are consonants. ɔ, ε 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.
($n^4 = n \times n \times n \times n$)

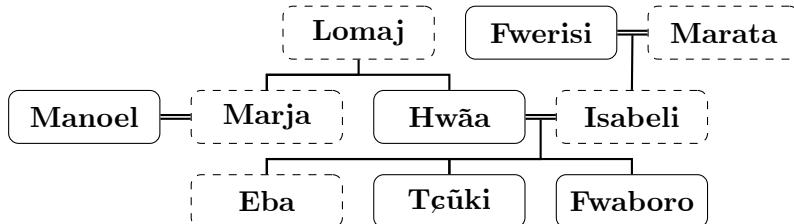
—Minkyu Kim

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 | Kati takai | <i>You(sg) met the dark capuchin monkey.</i> |
| Eba | Marja | Ta kabesiine | <i>Hadn't you(sg) finished telling (it) to me?</i> |
| Fwaboro | Isabeli | Katiatçena | <i>Did he/she give (it) to me?</i> |
| Fwerisi | Fwaboro | Ibahahia eene | <i>The woman was asking you(sg).</i> |
| Fwerisi | Hwāa | Arisiitçe | <i>You(sg) had finished looking for him/her.</i> |
| Isabeli | Tçuki | Bahaitçe | <i>You(sg) asked him/her.</i> |
| Lomaj | Fwerisi | Katakasiatçe | <i>He/She had finished meeting me.</i> |
| Lomaj | Eba | Kuretiahei | <i>You(sg) were buying it.</i> |
| Manoel | Hwāa | Ta esenetaane | <i>Didn't he/she believe him/her?</i> |
| Manoel | Tçuki | Džesenetaatçe | <i>He/She believed you(sg).</i> |
| Manoel | Lomaj | Kabesiatçe | <i>He/She had finished telling (it) to me.</i> |
| Marata | Lomaj | Džariahia katçä | <i>The man was looking for you(sg).</i> |
| Marata | Fwerisi | Kesenetaitçe | <i>You(sg) believed me.</i> |
| Marja | Isabeli | Kuretesia etoe | <i>The owl monkey had finished buying it.</i> |
| Tçuki | Hwāa | Itakahia | <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 | Kabiatçe kati | 1 _____ |
| Hwāa | Eba | Eene takahiatçena etoe | 2 _____ |
| Lomaj | Marata | Ta katçä arisiane | 3 _____ |
| Marja | 4 _____ | Ta itiatçene eene | <i>Didn't the woman give (it) to you(sg)?</i> |
| Eba | 5 _____ | Etoe bahaa katçä | <i>The man asked the owl monkey.</i> |
| Hwāa | 6 _____ | Kabesiana | <i>Had he/she finished telling (it) to me?</i> |
| Fwaboro | Isabeli | 7 _____ | <i>Was he/she buying the owl monkey?</i> |
| Hwāa | Marata | 8 _____ | <i>The dark capuchin monkey believed you(sg).</i> |
| Fwerisi | Hwāa | 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. **tç** 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>teeedokaipe</i> | <i>You(sg) did not carry him.</i> |
| 12. <i>teekiyaampeepe</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:

*katəva, higdil, hitxatavt, hitbatel, gadalti, zakanta, higniva, hikhalta,
kitavti, bitalt, ahəva, shimarti, ginev, gadəla*

- | | |
|--|---|
| 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, hitshaməra, 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.

ə ≈ 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:

| | | |
|----|----------|--|
| 𐰃 | adaq | foot |
| 𐰃𐰃 | altun | gold |
| 𐰃 | amtï | now |
| 𐰃𐰃 | ädgüti | well (<i>adv.</i>) |
| 𐰃 | bängü | eternal |
| 𐰃 | başlıyïy | <i>the head-bearer, the arrogant one</i> |
| 𐰃 | bilmäz | <i>he/she does not know</i> |
| 𐰃 | bodun | populace |
| 𐰃 | buluŋ | corner |
| 𐰃 | ičrä | inside |
| 𐰃 | ičyinu | <i>after losing</i> |
| 𐰃 | kälürtüm | <i>I brought</i> |
| 𐰃 | költä | <i>at the lake</i> |
| 𐰃 | oylan | boy |
| 𐰃 | oylitï | <i>their sons</i> |
| 𐰃 | ölti | <i>he/she killed</i> |
| 𐰃 | qara | black |
| 𐰃 | qiš | winter |
| 𐰃 | sub | water |
| 𐰃 | tirkiš | <i>to go on in a sequence</i> |
| 𐰃 | tölis | <i>Tölis (personal name)</i> |
| 𐰃 | uluy | great |
| 𐰃 | ümüzsän | <i>you will not think</i> |
| 𐰃 | yazı | <i>plains, field</i> |
| 𐰃 | yügürti | <i>it flowed</i> |

(a) Write out in the Old Turkic script:

- | | | | |
|----|-------|----------|---------------------------------|
| 1. | _____ | ärän | men |
| 2. | _____ | bïčdï | he/she cut |
| 3. | _____ | könjül | 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:

❖€YN

(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*. i 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 y are pronounced like k and g, respectively, but further back in the mouth. č, š and nj are consonants.

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

—Jaeyeong Yang

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Good luck!