



en

2024 International Linguistics Olympiad - Taiwan

First Round Individual Contest

18 February 2024

Problems

- Listen carefully to the invigilators and follow their instructions.
- The contest lasts three hours. The problem set consists of eight pages and it contains five problems. You may solve the problems in any order.
- You are not allowed to use any electronic devices, 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.
 - Unless stated differently, you do not need to describe any patterns or rules that you identified in the data.

2024 Taiwan Olympiad in Linguistics (TOL)

Round 1

Time : 2024/2/18 13:30-16:30

Problem #1 (20 points). Below is a map of a residential area in Ventspils. Each square symbolizes a resident's house and every house is perfectly square. All 16 houses have residents, five of them have the resident's name written already.

Janīna			
			Kalevi
Johan			
	Ülo		Yrjö



Below are three residents S, E and L who use their own languages to describe the directional relationship between two residents or between residents and themselves at home. Residents only express the eight cardinal and ordinal directions, and they do not refer to themselves in the third person. In each language, each direction is represented by only one word, and each directional word represents only one direction.

Resident S (Finnish):

Kalevi on minusta idässä.

Arvo on Erkkista etelässä.

Kaija on Yrjösta pohjoisessa.

Kaija on Janīnasta idässä.

Viktors on Kristinasta etelässä.

Olen Arvosta pohjoisessa.

Erkki on Grizeldasta lännessä.

Henrik on Davisista luoteessa.

Simo on Johanista idässä.

Resident E (Estonian):

Kalevi on minust idas.

Ülo on Kalevist edelas.

Ülo on Yrjöst läänes.

Janīna on Tõnisist põhjas.

Johan on Grizeldast edelas.

Olen Sakarist idas.

Kalevi on Simost põhjas.

Janīna on Yrjöst loodes.

Davis on Ülost idas.

Resident L (Livonian):

Kalevi u'm mi'nstõ idās.

Henrik u'm Janīnast jedālõs.

Erkki u'm Kristinast lüodsõ.

Kristina u'm Davisõst pū'ojsõ.

U'm Grizeldast jedālõs.

Grizelda u'm Kristinast pū'ojsõ.

Kristina u'm Simost lüodsõ.

Sakari u'm Johanõst idās.

(a) Write the names of Residents S, E and L.

(b) Describe the directional relations between the two residents in a sentence, in the specified language. If there is more than one way to describe them, you may write anyone you wish. If it cannot be described, write "Indescribable" .

1. **Ülo** and **Erkki** (Livonian)
2. **Simo** and **Grizelda** (Finnish)
3. **Kalevi** and **Yrjö** (Estonian)
4. **Viktors** and **Janīna** (Livonian)

(c) Below are some terms in Finnish and their English translations.

vesiputous *waterfall*

maatila *farm*

laidunmaa *pasture*

vesiratas *water wheel*

kaakossa *in the southeast*

Translate these sentences into Finnish:

5. *The waterfall is north of the farm.*

6. *The pasture is southeast of the water wheel.*

(d) Below are two other Residents X and Y describing their relations with their neighbors using their respective languages.

Resident X (Estonian):

Arvo on minust kirdes. Olen Henrik lõunas.

Davis on minust idas.

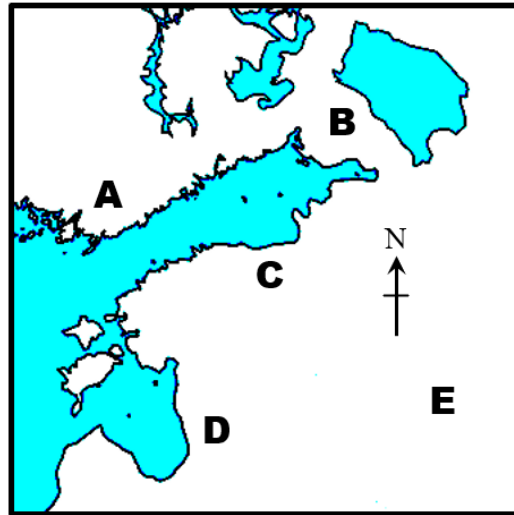
Resident Y (Livonian):

U'm Simost lāndsõ. Ülo u'm mi'nstõ ve'žgõrõs.

U'm Tõnisõst mõgõrõs.

Write the names of Residents X and Y.

(e) Please point out which area is historically referred to as Livonia from the four points A, B, C and D on the map below, and explain your choice sufficiently. In the map, white represents land, and gray represents the sea or lake.



⚠ Finnish, Estonian and Livonian all belong to the Finnic branch of the Uralic language family. Finnish is spoken by around 5,800,000 people, mainly located in Finland. Estonian is spoken by around 1,200,000 people, mainly located in Estonia. Livonian is critically endangered, with only 1 native speaker left.

— 張愷宸

Problem #2 (20 points). Here are two sentences in Turkish and their English translations:

ayakkabılık	<i>shoe rack</i>
kalemci	<i>pencil seller/maker</i>
fırın	<i>oven</i>
gazeteci	<i>journalist</i>
sütçü	<i>milkman</i>
susuz	<i>dehydrated, thirsty</i>

Here are some sentences in Turkish and their English translations in arbitrary order:

1. sulu	<i>A. eye</i>
2. balıkçı	<i>B. pencil case</i>
3. ayakkabıcı	<i>C. milk container</i>
4. kalemlik	<i>D. aqueous</i>
5. dişsiz	<i>E. fisherman, fish dealer</i>
6. dişli	<i>F. water seller</i>
7. sözlü	<i>G. cobbler, shoe dealer</i>
8. göz	<i>H. oral, verbal</i>
9. sucu	<i>I. lookout, overseer, ophthalmologist</i>
10. sütlük	<i>J. endless</i>
11. gözcü	<i>K. gear, toothed</i>
12. tuzluk	<i>L. wood, firewood</i>
13. odun	<i>M. without salt, little salt</i>
14. sonsuz	<i>N. toothless</i>
15. kitaplık	<i>O. salt shaker</i>
16. tuzsuz	<i>P. bookshelf</i>

(a) Determine the correct correspondences.

(b) Translate into Turkish:

- salty*
- woodshed*
- dentist*
- finite*
- spokesperson*
- water*
- baker*
- bookseller*
- without eyes*
- with [a] newspaper rack*

⚠ Turkish belongs to the Turkic family. It is spoken by approx. 70,000,000 people, mainly in Turkey (Türkiye). There are eight vowels in Turkish: a, e, ı, i, o, ö, u, ü. ı ≈ unrounded u. ö ≈ rounded e. ü ≈ rounded i. c ≈ English j in judge. ç ≈ ch in church. ş ≈ sh in short.

Problem #3 (20 points). Here are some more words in Old Tibetan, three Modern Tibetan dialects and their English translations:

Old Tibetan	Lhasa Tibetan	Batang Tibetan	Xiahe Tibetan	Translation
bdun	t̪y ¹³	d̪y ⁵⁵	dən	seven
bstud	t̪y ⁵²	t̪yʔ ⁵³	t̪ə	to connect
gtein	t̪eɪ ⁵⁵	t̪eɪ ⁵⁵	htɛən	urine
kʰji	cʰi ⁵⁵	t̪eʰi ⁵³	t̪ə	dog
ŋa	ŋa ¹³	ŋa ²³¹	ŋa	1
red	re ¹³²	zɛʔ ²³¹	re	to be
rgal	kɛ ¹³	gɛ ⁵⁵	ga	to cross (a river)
sprin	t̪ʂi ⁵⁵	t̪ʂi ⁵⁵	ʂən	cloud
su	su ⁵⁵	so ⁵³	sə	who
brgjad	cɛ ¹³²	d̪zɛʔ ⁵³		eight
gteu	t̪eu ⁵⁵	t̪eu ⁵³		to twist
bsd ____ (1)	t̪ɛ ¹³²			to sit down
bzi	ɛ ____ (2)		bzə	four
sbrul	t̪ʂ ____ (3)	d̪zɛ ⁵⁵	ru	snake
skra	t̪ʂ ____ (4)	t̪ʂa ⁵³	htɛa	hair on the head
bstan	t̪ɛ ⁵⁵	t ____ (5)		to show
bul		p ____ (6)		alkali
gn̥id		ŋ ____ (7)		to fall asleep
ri	ri ¹³	z ____ (8)	rə	mountain
spu	pu ⁵⁵	p ____ (9)	χwə	fur
za	sa ¹³	s ____ (10)	sa	to eat
fiŋ ____ (11)	ky ¹³	ŋg ____ (12)	ŋgu	to wriggle
brtsi	t̪s ____ (13)	t̪s ____ (14)	rtsə	to calculate
rku	k ____ (15)	k ____ (16)	rkə	to steal
bja	t̪eʰ ____ (17)		ɛ ____ (18)	bird
fiɸu	p ____ (19)		mb ____ (20)	insect
dran	t̪ʂɛ̃ ¹³	t̪ʂɛ̃ ¹³	t̪ʂ ____ (21)	to recall
fiɸʰjid	t̪eʰi ⁵²		ɛ ____ (22)	to wipe (the table)

Fill in the cells (1)–(22) (you don't have to fill in the shaded ones).

⚠ The numbers on the upright corner of Lhasa Tibetan and Batang Tibetan words represent tone. Value 1 indicates the lowest pitch and value 5 indicates the highest pitch. b, d, d̪, d̪z, g, fi, j, l, m, n, ŋ, ŋ, r, w, z, z̪ and z̪ are voiced consonants; c, cʰ, ɛ, h, k, kʰ, p, pʰ, s, sʰ, ʂ, t, tʰ, t̪, t̪e, t̪eʰ, t̪ʂ, t̪ʂ, t̪ʂʰ, χ and ʔ are voiceless consonants; a, e, ə, ε, i, i, u, ʊ and y are vowels. The mark "̃" on vowels indicates that the vowel is nasalized.

Tibetan belongs to the Tibeto-Burman branch of the Sino-Tibetan family. It is spoken by approx. 6,000,000 people in southwestern China and adjacent countries. Lhasa Tibetan is mainly spoken in Lhasa City (Tibet Autonomous Region), Batang Tibetan is mainly spoken in Batang County (Sichuan Province) and Xiahe Tibetan is mainly spoken in Xiahe (Sangqu) County (Gansu Province).

— 黃日昇

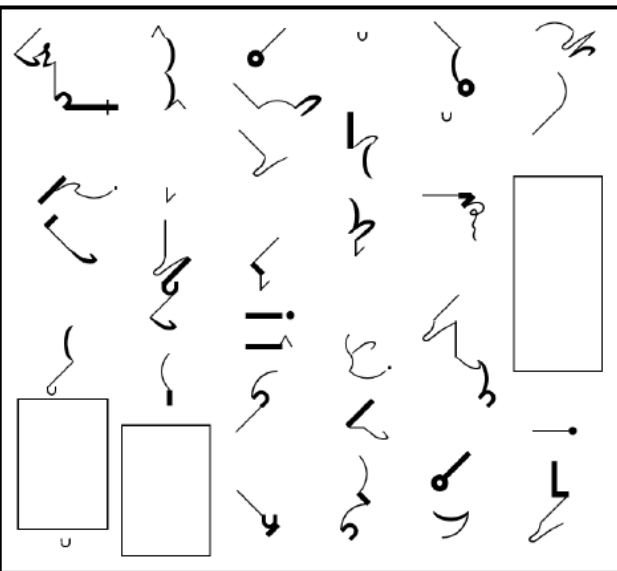
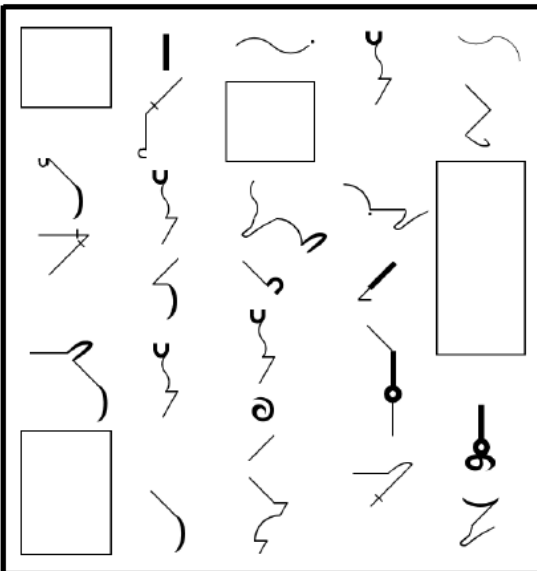
Problem #4 (20 points). Below are excerpts of Mandarin articles on ‘Ya Liang’ and ‘Xian Qing Ji Qu’ and their Mandarin shorthand (in connected style).

我們不禁哄堂大笑，同樣的一件衣料，
 每個人卻有不同的感覺。那位朋友連忙把衣
 料用紙包好，她覺得衣料就是衣料，不是棋
 盤，也不是稿紙，更不是綠豆糕。
 ——宋晶宜〈雅量〉

Wǒ men bù jīn hōng táng dà xiào, tóng yàng de
 yī jiàn yī liào, měi ge rén què yǒu bù tóng de gǎn jué.
 Nà wèi péng yǒu lián máng bǎ yī liào yòng zhǐ bāo
 hǎo, tā jué de yī liào jiù shì yī liào, bú shì qí pán, yě
 bú shì gǎo zhǐ, gèng bú shì lǜ dòu gāo.

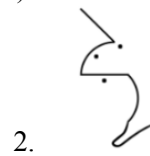
年長思之，二蟲之鬥，蓋圖奸不從也，古語云
 「奸近殺」，蟲亦然耶？貪此生涯，卵為蚯蚓所哈，
 腫不能便，捉鴨開口哈之，婢媼偶釋手，鴨顛其頭
 作吞噬狀，驚而大哭，傳為語柄。此皆幼時閒情也。
 ——沈復〈閒情記趣〉

Nián zhǎng sī zhī, èr chóng zhī dòu, gài tú jiān bù cóng
 yě, gǔ yǔ yún “jiān jìn shā”, chóng yì rán yé? Tān cǐ shēng yá,
 luǎn wéi qiū yǐn suǒ hā, zhǒng bù néng biàn, zhuō yā kāi kǒu
 hā zhī, bì yù ǒu shì shǒu, yā diān qí jǐng zuò tūn shì zhuàng,
 jīng ér dà kū, chuán wéi yǔ bǐng. Cǐ jiē yòu shí xián qíng yě.



(a) Fill in the blank.

(b) Transcribe into Mandarin (Characters, Bopomofo or Hanyu Pinyin):



(c) Transcribe into Mandarin shorthand (in connected style):

3. 迴紋針 (huí wén zhēn)
4. 白馬王子 (bái mǎ wáng zǐ)
5. 總而言之 (zǒng ér yán zhī)
6. 君子愛財，取之有道 (jūn zǐ ài cái, qǔ zhī yǒu dào)

(d) In the two articles ‘Ya Liang’ and ‘Xian Qing Ji Qu’ mentioned above, there is a Chinese character written in a conventional way, and one of them is particularly different from the others. Find out the word and transcribe it into Mandarin shorthand according to general rules (not conventions).

△ Mandarin shorthand originated in 1896 and evolved in line with changes in writing methods and pronunciation. Many schools of shorthand systems have contended for more than a hundred years. Among them, the one invented by Cai Xiyong is the representative one, which contains two styles: the one-graph-per-syllable script for exercises and the connected style for real use. Representative works include Cai Xiyong’s “Fast Words for Sounds” (1896) and Cai Zhang’s “Chinese Stenography” (1912). This shorthand method was used for decades in the Congressional records of the Republic of China starting in 1910.

— 雷翔宇

Problem #5 (20 points). Here are some sentences in Penrhyn and their English translations:

- | | |
|---|--|
| 1. kā kave atu au i te kava | <i>I will take away the alcohol.</i> |
| 2. ka takeo te ika i koe | <i>The fish will make you (sg) dizzy.</i> |
| 3. i tunuhia te ika ē au | <i>The fish was cooked by me.</i> |
| 4. moehia e tāua | <i>[Let's] sleep, we two!</i> |
| 5. i kave kōrua i te māroro kiā māua | <i>You two brought the flying fish to us two.</i> |
| 6. kā kave te tangata i te kaveu | <i>The man will take the coconut crab.</i> |
| 7. ka kavehia tātou kiā vai | <i>Who will we be brought to?</i> |
| 8. kavehia te ruru kiā kōrua | <i>Bring the torch to you two!</i> |
| 9. e aha tē kā kave mai koe | <i>What will you (sg) bring here?</i> |
| 10. i rere tere | <i>Tere flew.</i> |
| 11. i tunu tepure i te tavake | <i>Tepure cooked the red-tail tropic bird.</i> |
| 12. e te tangata tē ka kavehia atu e kōtou | <i>It's the man that will be taken away by you (pl).</i> |

(a) Translate into English: (Sentence 17. is a conversation between two people.)

13. **kā moe te māroro**
14. **kavehia atu te tangata**
15. **i takeohia mātou e rīnā**
16. **e te kava tē kā kave mai tepure**
17. **e aha te i kave koe kiā tāua / e te kaveu te i kave au kiā tāua**

(b) Translate into Penryn: (Sentence 21. and 22. are conversations between two people.):

18. *Cook the flying fish, you (sg)!*
19. *The fish was made dizzy by the alcohol.*
20. *The red-tail tropic bird will fly away.*
21. *Who will we bring the man to? / The man will be brought to Rīnā by us.*
22. *What will we bring here to Sokoau? / It's the torch that you (pl) will bring here to Sokoau.*

△ Penrhyn belongs to the Malayo-Polynesian branch of the Austronesian language family. It is spoken by approx. 200 people on Penryn Atoll (Tongarewa Atoll) and nearby islands in the Cook Islands. The mark ^ˉ indicates that the vowel is long.

— 林濬祺

命題委員會：雷翔宇（主編）、林濬祺、謝舒凱
排版製作：謝舒凱

加油！