



# AILO

All Ireland Linguistics Olympiad  
*The Problem Solvers' Challenge*

## National Final, Individual Paper

Wednesday 20th March 2019, DCU  
5 Questions, 2½ hours

*Answer as many of the questions as you can.  
Write your answers in the Answer-book provided.*



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## Question A: Writing up in Hanunó'o

Ethan Chi

The *Hanunó'o* script is an indigenous Filipino script used to write the Hanunó'o language. It is written vertically, as opposed to horizontally like the English alphabet. This is because traditionally, Hanunó'o was written by carving characters into strips of bamboo.

Here is a list of Filipino cities written in Hanunó'o. Below is the same list in Roman script, but in a different order.

1	2	3	4	5	6	7	8	9
								
								
								
								
								

A. Manila

B. Tubili

C. Paluan

D. Rumbang

E. Kaingal

F. Marikit

G. Pasig

H. Magsikap

I. Sablayan

**A1.** Match up the Hanunó'o carvings 1-9 with the city names A-I.

**A2.** Write the four Hanunó'o words illustrated in Roman script.

**A3.** Write the following words in the Hanunó'o script:

(a) *manuk*

(b) *bilaun*

(c) *nagsirung*

(a)	(b)	(c)	(d)
			
			
			
			

## Question B: Harmongolian

Ethan Chi

Here are some words in the Khalkha dialect of Mongolian, a language spoken by approximately 5.2 million people in Mongolia and parts of China. Normally, Mongolian is written in either Cyrillic or a native Mongolian script. However, for ease of reading, all words have been transcribed into Roman script.

For each word, the forms for the singular, plural, and directive (meaning ‘towards’) are given, as well as the pronunciation of the singular form. Some forms are missing.

Note: in the Pronunciation column, a colon (:) after a vowel indicates that the vowel is long. The ' symbol indicates that the following syllable is stressed. [ɣ] denotes a consonant that sounds like a *g* but pronounced farther back in the mouth, [ŋ] denotes the *ng* sound of *sing*, [tʃ] is the *ch* sound as in *church*, [ʃ] is the *sh* sound as in *ship*, [x] is the *ch* sound as in German, Scottish or Irish, [ə] is a vowel pronounced like the *e* in *pet*, but with rounded lips, similar to French *eu* or German *ö*; [y] is a vowel pronounced like *ee* but with rounded lips, similar to French *u* or German *ü*.

Singular	Plural	Directive	Pronunciation	Translation
<i>havčaar</i>	<i>havčaaruu</i>	<i>havčaarluu</i>	[xav'tʃa:r]	dog
<i>örh</i>	<i>örhүүд</i>	<i>örhrүү</i>	[ørx]	household
<i>mangar</i>	<i>mangar nar</i>	<i>mangarluu</i>	['mangar]	fool
<i>hun</i>	<i>hun nar</i>	<i>hunruu</i>	[xuŋ]	man
<i>övs</i>	<i>övsүүд</i>	<i>övsrүү</i>	[øvs]	grass
<i>heer</i>	<i>heerүүд</i>	<i>heerlүү</i>	[xe:r]	field
<i>neg</i>	<i>negүүд</i>	<b>(a)</b>	[neg]	ace (playing card)
<i>denlүү</i>	<i>denlүүчүүд</i>	<i>denlүүрүү</i>	[den'ly:]	lamp
<i>zutan</i>	<i>zutanuud</i>	<i>zutanruu</i>	['zutaŋ]	cream soup
<i>sugar</i>	<i>sugaruud</i>	<i>sugarluu</i>	['sugar]	Venus (planet)
<i>šüleg</i>	<b>(b)</b>	<b>(c)</b>	['ʃyleg]	poem
<i>gal</i>	<i>galuud</i>	<i>galruu</i>	[gal]	fire
<i>nuguu</i>	<i>nuguučuud</i>	<i>nuguuruu</i>	[nu'gu:]	back (body part)
<i>nökör</i>	<b>(d)</b>	<b>(e)</b>	['nøkər]	husband
<i>darga</i>	<b>(f)</b>	<b>(g)</b>	<b>(h)</b>	mouth
<i>gölög</i>	<i>gölögүүд</i>	<i>gölögrүү</i>	['gөлөг]	puppy
<i>aav</i>	<i>aav nar</i>	<i>aavruu</i>	[a:v]	father
<i>hүүhen</i>	<i>hүүhen nar</i>	<i>hүүhenрүү</i>	['xy:xen]	woman
<i>ovog</i>	<b>(i)</b>	<b>(j)</b>	['ovog]	surname

**B1.** Fill in the missing forms (a-j).

**B2.** One of the following Mongolian words was originally a loanword from another language: *nutag, kända, šoron, ehner*. Which one is it and how do you know?

**B3.** Give the plural, directive, and pronunciation (including stress where necessary) of the following words:

- (a) *haančlah* 'king'
- (b) *gürvel* 'lizard'
- (c) *delgüür* 'shop'
- (d) *zuun* 'century'
- (e) *čanar* 'quality'

**B4.** Explain the rules for forming the plural and directive forms of a word, the rules for placement of stress, and any rules indicating alternative pronunciations of letters (do not mention letters for which the pronunciation is always the same).

### Question C: Lopit or hate it

Moody

Below are some sentences in the Dorik dialect of Lopit, a language spoken by around 50,000 people in the Eastern Equatoria province of South Sudan. The Lopit people live in around 60 villages along the Lopit mountain range. They grow a range of crops and farm cattle, sheep and goats.

<i>eitiyena Iliwa aina</i>	Iliwa teaches today.
<i>eremo Lohidong waraga ho iguarit</i>	Lohidong spears the paper with the pen.
<i>oromo haboroni de mana</i>	The big man digs in the field.
<i>oboro habarani</i>	The farmer is big.
<i>eibongo haidoloni ho haromoni de lecari</i>	The singer meets with the digger at the dancehall.
<i>eifuo Ihidong de leitiyenari</i>	Ihidong cooks at the school.
<i>efer hingohu de halu na haji</i>	The dog lies at the back of the house.
<i>eiyoma haromok de iferit</i>	The diggers rest on the mat.
<i>eramita wurre ho hingohu</i>	The children play with the dog.

**C1.** Translate into Lopit:

- (a) The toy of the farm is big.
- (b) The big men dance with the spade in the kitchen.
- (c) The teacher sings in the writing-room.
- (d) The farmers write in the playground.
- (e) The dancers play with the spear in the meeting-room.

**C2.** Explain the rules for Lopit word formation as seen in these examples.

### Question D: Watch that cow

Harold Somers

Modern Hebrew is spoken by over 9 million people worldwide, though mainly in Israel. Based on Biblical Hebrew that hadn't been spoken for 2,000 years, it is the best example of a dead language being revived. Consider the following eleven sentences in (transliterated) modern Hebrew together with their translations. Note that š, ĥ and ʔ are consonants.

<i>haparah šomeret al hajeled</i>	The cow watches the boy.
<i>haparot šamru al hajaldah</i>	The cows watched the girl.
<i>hajaldah hatovah katva et hasefer hazeh</i>	The good girl wrote this book.
<i>haseĥken hagadol šomer al hajeladim</i>	The big actor watches the boys.
<i>hajaldah hazot kotevet et hasefarim hagadolim</i>	This girl writes the big books.
<i>hajaldot hatovot šomrot al haseĥkanim</i>	The good girls watch the actors.
<i>hakelabim šomrim al hamalĥah hazot</i>	The dogs watch this queen.
<i>ĥatul katon šamar al haʔaĥbar</i>	A small cat watched the mouse.
<i>hajm katvu miktav ʔaroĥ laseĥken</i>	They wrote a long letter to the actor.
<i>saĥkanot kotvot neʔumim tovim</i>	Actresses write good speeches.
<i>hu katav et haʔagadah lamalĥah</i>	He wrote the story for the queen.

**D1.** Translate the following into Hebrew:

- (a) A queen writes long stories for the actors.
- (b) This king watched the good cats.
- (c) The small girl watched this actress.
- (d) The good dog wrote long letters for the queens.
- (e) They write a good speech for the kings.
- (f) He writes the letter to the mice.

**D2.** Explain the features of Hebrew grammar seen in these examples.

## Question E: Countdown in Gumatj

Ethan Chi

Although many Aboriginal Australian languages do not have words to express large numbers, Gumatj, which is spoken by around 240 people in the Northern Territory of Australia, has a rich vocabulary for large numbers. Below are some numerical equations in the Gumatj language. All numbers are positive integers.

- (a)  $marrma \times wanggang = marrma$
- (b)  $lurrkun\ rulu\ ga\ wanggang + wanggang\ rulu\ ga\ wanggang = dambumiriw\ rulu\ ga\ marrma$
- (c)  $lurrkun + lurrkun\ rulu\ ga\ lurrkun = dambumiriw\ rulu\ ga\ wanggang$
- (d)  $wanggang\ rulu\ ga\ marrma + wanggang = wanggang\ rulu\ ga\ lurrkun$
- (e)  $lurrkun \times dambumiriw = marrma\ rulu\ ga\ marrma$
- (f)  $wanggang\ rulu\ ga\ lurrkun + marrma\ rulu\ ga\ lurrkun = dambumiriw\ rulu\ ga\ wanggang$

**E1.** Write the above equations in Arabic numerals (ordinary numbers).

**E2.** Write the following Gumatj numbers in Arabic numerals.

- (a) wanggang
- (b) dambumiriw rulu ga lurrkun
- (c) marrma rulu ga wanggang

Here are some more equations in Gumatj:

- (a)  $lurrkun\ rulu\ ga\ dambumiriw + dambumiriw\ rulu\ ga\ wanggang = dambumirri\ ga\ lurrkun\ rulu$
- (b)  $lurrkun\ rulu\ ga\ wanggang \times marrma = dambumirri\ ga\ wanggang\ rulu\ ga\ marrma$
- (c)  $wanggang\ rulu\ ga\ lurrkun \times wanggang\ rulu\ ga\ lurrkun = marrma\ dambumirri\ ga\ marrma\ rulu\ ga\ dambumiriw$
- (d)  $marrma\ rulu\ ga\ marrma \times marrma\ rulu = dambumiriw\ dambumirri\ ga\ dambumiriw\ rulu$
- (e)  $dambumirri\ rulu \times marrma = marrma\ dambumirri\ rulu$

**E3.** Write the above equations in Arabic numerals.

**E4.** Write the following Arabic numerals in Gumatj.

- (a) 38
- (b) 85
- (c) 106

**E5.** One of the Gumatj number words also means 'bundle'. Which one is it?