Instructions

Dear students!

Before you start solving the tasks in this olympiad, please, read carefully the following instructions.

The booklet you are just reading contains six problems of the school round of CLO. *When you are given the instruction,* you may turn the page and start solving. Please, write your answers on the papers with the problems, or on additional, loose papers, in a legible fashion. Mark every sheet of paper you use during this school round with your name and with the number or name of the problem it belongs to. If your solution spreads over multiple sheets of paper, please mark every paper also with its order within the whole solution for that problem. Please, never use one paper for solutions of multiple problems. When you are finished with all the problems or when the allotted time expires, please submit all papers you will have used during the whole school round.

Do not be afraid to write rather more than less in your solution; superfluous information, even if wrong, is not penalised.

During the competition, use only a pen, paper, and all your knowledge and skills. Dictionaries, cheat sheets, electronic devices, as well as co-operation with others is forbidden. Problems are designed in such a way that they are based on an actual natural language but you are expected to not know the language or its script. If, indeed, the languages or scripts on which the problems are based are alien to you, this was intended. If you happen to know some of them, that is good for you and you do not have to conceal the fact in your solutions. In either case, provide an explanation how the answer can be determined even without the knowledge of lesser known languages or scripts in tasks that ask you for explanation. (We consider all languages on which these problems are based, and the Chinese and Arabic script "lesser known".)

You have 90 minutes for the entire school round. We wish you a sharp mind and good luck!

The organising team of CLO,

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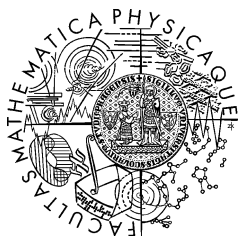
1 Hebrew verbs   (11 points)

We provide you with examples of several Hebrew verbs, substantives and adjectives. Study them carefully and try to understand relations between them, and patterns in their derivation.

gadol	–	big	mištacher	–	(he) turns black
kachol	–	blue	mitgadel	–	(he) grows bigger
karov	–	near	mitkachel	–	(he) turns blue
katan	–	small	mitkarev	–	(he) goes nearer
kotev	–	(he) writes	mitnašek	–	(he) kisses himself
loveš	–	(he) wears clothes	mitrachec	–	(he) washes himself
magdil	–	(he) makes bigger	mitrachek	–	(he) goes further
makchil	–	(he) colours to blue	nešika	–	a kiss
maktiv	–	(he) dictates	rachok	–	far
malbiš	–	(he) dresses (somebody)	šachor	–	black
marchic	–	(he) washes	šavur	–	broken
marchik	–	(he) moves (something) away	šikor	–	drunk
mašchir	–	(he) colours to black	zocher	–	(he) remembers
mištaber	–	(it) breaks apart			

(In some cases, for reasons irrelevant to us, the letters ch-k, and b-v alternate; don't let it confuse you. In your solution, you can use any variant. Also note that 'ch' is a single letter, denoting a single sound, just like in Czech.)

Task 1: You should obtain three generic groups: one a mix of verbs, substantives and adjectives which carry the "basic" meaning, and two having the meaning specifically shifted with respect to the basic meaning. Try to characterise the latter two groups with regard to their meaning (i.e., describe their relation to the basic meaning).

Task 2: Based on your observations, translate the following words:

from English to Hebrew:

(he) is getting drunk, (he) lessens (something), (he) dresses (himself)

from Hebrew to English:

mitkaten, mazkir, makriv

Remember that rigour pays off. Even in a very regular system, there can be exceptions hiding.

2   Arabic   (9 points)

Match English sentences (1–7) with their Arabic equivalents (a–g).

1. How are you?

2. I am eating bread with cheese.

3. Where is the cheese?

4. We sat under a window of a house.

5. A woman is sitting on a chair.

6. This is an old house.

7. I live next to the new district.

(a) اسكن أمام المنطقة الجديدة.

(b) اين جبن؟

(c) كيف حالك؟

(d) هذا بيت قديم.

(e) آكل خبز و جبن.

(f) تجلس مرأة في الكرسية.

(g) جلسنا تحت شباك بيت.

3   Tajik   (5 points)

Below are three Tajik phrases and their English translations.

дӯсти хуби ҳамсояи шумо — a good friend of your neighbour
ҳамсояи дӯсти хуби шумо — a neighbour of your good friend
ҳамсояи хуби дӯсти шумо — a good neighbour of your friend

Task 1: Match every Tajik word with its English translation.

Task 2: Explain your assumptions, hypotheses or the whole procedure how you arrived at the solution. (We expect you will need two assumptions/hypotheses to arrive at the solution.)

4   All Tamil   (12 points)

Below you can see a few phrases from the South Indian language Tamil. Read the phrases carefully and try to determine what each word means and how it is formed. Then, solve three tasks.

kaṭaikal ellām	–	all shops (nominative)
maṇitaṟkal ellāraiyum	–	all people (accusative)
paṭankal ellāvaṟṟōṭum	–	with all lessons (sociative)
naṇparkal ellārālum	–	through all friends (instrumental)
ellā maṇitaṟkal	–	all people (nominative)
ellā paṭankalaiyum	–	all lessons (accusative)
naṇparkal ellārōṭum	–	with all friends (sociative)
ellā kaṭaiykalyālum	–	through all shops (instrumental)
kaṭaikal ellāvaṟraiyum	–	all shops (accusative)

Notes

Nominative: the grammatical case of the subject

Accusative: the grammatical case of the direct object

Sociative: the grammatical case that is used to say the activity denoted by the verb is taking place with another person apart from the one denoted by the nominative (the subject)

Instrumental: the grammatical case of the instrument

Tasks

Task 1: Translate into Tamil *in both possible ways*:

> All friends (nominative)
> With all shops (sociative)

Task 2: Translate from Tamil and note down which case has been used:

> ellā naṇparkalaiyum
> paṭankal ellāvaṟrālum

Task 3: What determines which of the words *ellāṟaiyum* or *ellāvaṟṟaiyum* gets used in a phrase denoting a large amount? Look at the examples of their accusative use below.

maṇitaṟkal ellāraiyum	–	all people (accusative)
kaṭaikal ellāvaṟraiyum	–	all shops (accusative)

5   Chinese characters   (7 points)

The following table lists a few Chinese characters, their phonetic transcriptions, and their English translation.

汀	tīng	seashore	浯	wú	the Wu river
咏	yǒng	to sing	咀	jǔ	to chew
燂	tán	smoke	烘	hōng	to grill
沮	jǔ	tearful	吵	chāo	to speak loud
叮	dīng	to bite	炷	zhù	wick
洪	hōng	flood	浅	qiǎn	shallow
炒	chǎo	to stir-fry	炊	chūi	to steam
唔	wú	to read loud	哄	hōng	to laugh
注	zhù	to pour	吹	chūi	to blow

Tasks

Task 1: Based on information from the table, match the following Chinese characters with their English translation:

1. 泳   2. 焐   3. 叫

    (a) to shout   (b) to swim   (c) to warm up

Task 2: Match the characters with their phonetic transcription:

1. 玎   2. 烘   3. 吵   4. 怐   5. 吾

    (a) dīng   (b) jù   (c) chào   (d) wú   (e) hōng

Task 3: Describe how you analysed the Chinese characters.

6   Solution at hand   (16 points)

Counting systems in nearly all languages are based on the same principles. Can you find how numerals are formed in kewa?

Data

value	numeral
5	kina kode
6	kina kode lapo
12	ki repo
14	ki repona kode lapo
19	ki malana kode repo

Tasks

Task 1: Fill in the table:

value	numeral
8	
15	
17	
	kina kode repo
	ki malana kode lapo
	ki lapona kode

Don't forget to describe thoughts that led you to your solution, and principles of how numerals are formed in kewa.

Task 2: *Ki* (or *kina*) and *kode* have one more meaning in kewa. Guess which one.