

First International Olympiad in Theoretical, Mathematical and Applied Linguistics

8–12 September 2003, Borovetz, Bulgaria

Team Contest

Problem 1 (35 marks)

In the first millennium CE there were in Chinese Turkestan two closely related languages, Tocharian A and Tocharian B, which had descended from a common ancestor, Proto-Tocharian. Here are some Proto-Tocharian words as they have been reconstructed by scholars:

ākänatsa	‘unreasonable’		päratsako	‘chest (breast)’		stāŋkä	‘palace’
āsare	‘dry’		räsäkäre	‘sharp’		tsäŋkär	‘top’
āstäre	‘pure’		sämä	‘same’		wälo	‘king’
kärämärtse	‘black’		säkäre	‘happy’		yäsär	‘blood’

And here are Tocharian A and Tocharian B words which are descendants of the Proto-Tocharian words listed above (in no particular order):

stāŋk, walo, räskare, āsar, astare, āstăr, āstre, asāre, stāŋk, wäl, wlo, pratsäko, pratsak, aknats, aknätsa, tsäŋkär, tsäŋkär, kramartse, krämärts, räskär, sam, säm, ysär, säkär, yasar, säkre, ysär.

Assignment 1. Determine which word belongs to which language, knowing that:

- in one of the languages some words have two variants;
- the first word is Tocharian A.

Assignment 2. Allocate the following words to languages and reconstruct the Proto-Tocharian form of each pair:

- (a) *stäm, štäm* ‘tree’;
- (b) *rtär, ratre* ‘red’;
- (c) *pärs, parso* ‘letter’.

Assignment 3. It is thought that Tocharian B had stress (as in English more or less). Upon what might this hypothesis be based?

Note: ā is a prolonged a, š sounds as sh, ň as ng; the sequence ts is pronounced as a single consonant, ä is a specific Tocharian vowel.
(Svetlana Burlak)

Problem 2 (30 marks)

When describing how personal and reflexive pronouns work in various languages, linguists make use of the so-called subscripts—Roman letters (typically i, j, k, ...) which mark pronouns and some other words in sentences. The character * (asterisk) is also used. Here are some English examples:

1. John_i saw himself_i in the mirror.
2. John_i says that he_{i/j/*k} doesn't know Peter_k.
3. The boy_i is playing with his_{i/j} gun.
4. His_i teacher_j's influence is easily seen in his_{i/*j/k} work.
5. The girl_i saw her_{*i/j}.

Assignment 1. Explain the meaning of the subscripts and the asterisk.

Assignment 2. Add subscripts (and asterisks where appropriate) in the following sentences:

- (a) She doesn't like this trait in herself.
- (b) The father took his son to his room.
- (c) John knows that Peter has given his book to his son.

(Maria Rubinstein)

Problem 3 (35 marks)

Consider the following pairs of verbs with closely related meanings:

<i>accuse</i>	<i>rebuke</i>
<i>denounce</i>	<i>reprehend</i>
<i>command</i>	<i>instruct</i>
<i>advise</i>	<i>guide</i>
<i>assure</i>	<i>convince</i>

It is known that all verbs in the left-hand column have a certain ability that the verbs in the right-hand column lack.

Assignment 1. Identify the ability in question.

Assignment 2. Find the verbs that also have this ability among the following: *extort, threaten, forbid, swear, shout, approve, refuse, rob, dedicate, lose, scold, give up, demand*.

Assignment 3. Try to find two more verbs with the same ability.

(Boris Iomdin)