

Ancient Greek

Consider these phrases in Ancient Greek (in a Roman-based transcription) and their unordered English translations:

- | | |
|-----------------------------------|--|
| (A) <i>ho tōn hyiōn dulos</i> | _____ (1) the donkey of the masterō |
| (B) <i>hoi tōn dulōn cyrioi</i> | _____ (2) the brothers of the merchant |
| (C) <i>hoi tu emporu adelphoi</i> | _____ (3) the merchants of the donkeys |
| (D) <i>hoi tōn onōn emporoi</i> | _____ (4) the sons of the masters |
| (E) <i>ho tu cyriu onos</i> | _____ (5) the slave of the sons |
| (F) <i>ho tu oicu cyrios</i> | _____ (6) the masters of the slaves |
| (G) <i>ho tōn adelphōn oicos</i> | _____ (7) the house of the brothers |
| (H) <i>hoi tōn cyriōn hyioi</i> | _____ (8) the master of the house |

1. Match the Ancient Greek phrase (A-H) with the corresponding English translation(1-8).

2. Translate into Ancient Greek:

a) the houses of the merchants

b) the donkeys of the slave.

Note: the letter **ō** stands for a long *o*.

Aragonese

In the Iberian Peninsula, there are several languages, apart from Portuguese and Spanish (Castilian), that share the same romanian origin, such as Catalan, Galician, Mirandese, Asturian, Leonese and Aragonese. The list below brings a list of words in Aragonese, their plural forms and their translations to . Seguem algumas palavras em aragonês com suas traduções para o português e suas formas no plural:

valley	<i>bal</i>	<i>bals</i>
stool	<i>banquet</i>	<i>banquetz</i>
hole	<i>clot</i>	<i>clotz</i>
stone	<i>cantal</i>	<i>cantals</i>
awake	<i>concordau</i>	_____
chocolate	<i>chicolat</i>	_____
union	<i>chunta</i>	_____
unhanded	<i>deixau</i>	<i>deixaus</i>
eclipse	<i>eclix</i>	_____
cicada	<i>ferfet</i>	_____
character	<i>personache</i>	<i>personaches</i>
fish	<i>peix</i>	<i>peixes</i>

Write down the missing words.

Lalana Chinantec

Lalana Chinantec is a language spoken by approximately 10,000 people who live in the Oaxaca region of Mexico. In the following orthography a colon (:) marks a long vowel, and the ʔ symbol marks a glottal stop (like the sound in the middle of uh-oh).

kalakwa: kwi: li:ʔ	The beautiful corn grew.
miladʒö mo:h kya	My pineapples have turned out well.
li:ʔ kalane kwi: kwa: kya	My tall corn yellowed beautifully.
dʒö kalaro:h mo:h ne kya	My yellow pineapples ripened well.
kaladʒö kwi:	The corn turned out well.
milakwa: kwi:	The corn has grown.

1. What does the word **li:ʔ** mean? _____

2. What does the word **ro:h** mean? _____

3. Translate the following sentences into Lalana Chinantec:

a) The good pineapples became beautiful.

b) My ripe corn has yellowed well.

4. Translate the following sentences into English:

c) **milaro:h kwi: ne** _____

d) **li:ʔ kalakwa: kwi:** _____

Problem by Rachel Nordlinger
for the Australian Computational and Linguistics Olympiad 2008

Data from Merrifield, W. et al (2003). *Laboratory Manual for Morphology and Syntax*, 7th edition. Dallas: SIL International.

Molistic

Imagine that you have heard these sentences: Jane is molistic and slatty.

Jennifer is cluvious and brastic.

Molly and Kyle are slatty but danty.

The teacher is danty and cloovy.

Mary is blitty but cloovy.

Jeremiah is not only sloshful but also weasy.

Even though frumtsy, Jim is sloshful.

Strungy and struffy, Diane was a pleasure to watch.

Easy though weasy, John is strungy.

Carla is blitty but struffy.

The salespeople were cluvious and not slatty.

1. Then which of the following would you be likely to hear?

_____ a. Meredith is blitty and brastic.

_____ b. The singer was not only molistic but also cluvious.

_____ c. May found a dog that was danty but sloshful.

2. What quality or qualities would you be looking for in a person?

_____ a. blitty

_____ b. weasy

_____ c. sloshful

_____ d. frumtsy

Persian

Several Persian phrases are presented together with their translations:

gorbe zir-e raxtexāb	the cat under the bed
xāne pāin-e kuh	the house under the mountain
čahārpāye zir-e miz	the stool under the table
ğāyeğ zir-e pol	the boat under the bridge
amānat pāin-e dar	the package under the door
šahr zir-e āftāb	the city under the sun
nāme zir-e ketāb	the letter under the book
ketāb pāin-e komod	the book on the lowest shelf in the bookcase

1. Translate into English:

- a) čahārpāye pāin-e miz _____
- b) ketāb zir-e komod _____

2. Here are two English phrases and their Persian translations (with gaps):

- c) the stone under the water sang _____ āb
- d) the box under the tree ja'abe _____ deraxt

Fill the gaps. If you think that some of them can be filled in more than one way, give all possible answers. Explain your solution.

Note: ā, â, š, č, ğ, ' represent specific Persian sounds.

Kazakh

Several phrases have been translated into Kazakh (written in Roman script here), but the translations are given in random order. Some of the words are missing.

- | | | |
|------------------------|----------|-----------------|
| a. one and five | ___i. | ___ ben elüw |
| b. one and eight | ___ii. | bir men bes |
| c. three and two | ___iii. | bir ___ segiz |
| d. four and seven | ___iv. | elüw eki men on |
| e. seven and fifty | ___v. | ___ men elüw |
| f. eight and fifty | ___vi. | otız ben ___ |
| g. thirteen and thirty | ___vii. | tört pen žeti |
| h. thirty and two | ___viii. | üş ___ eki |
| i. fifty-two and ten | ___ix. | on üš pen otız |

1. Match each phrase with its correct translation and supply the missing words.

2. Translate into Kazakh:

- | | |
|--------------------------|-------|
| a. five and thirty-eight | _____ |
| b. ten and four | _____ |
| c. seven and fifty-three | _____ |
| d. thirty-eight and five | _____ |

Note: **i, ö, ü, ı** are specific Kazakh vowels. The letter **ž** has the sound of *z* in the word *usual*.

! Kazakh language belongs to the Central Turkic groups of languages. It is the official language and principle native language of the Republic of Kazakhstan. It is spoken by about 6,5 million people in Kazakhstan and about 1,5 million people southern Siberia, northwestern China and northwestern Mongolia.

Problem by Pyotr Zubkov
for the Moscow Traditional Olympiad of Linguistics 2002/2003

Taikyoku Shōgi

Japanese Chess (*Shōgi*), played on a board of size 9 by 9 and with a total of 40 men, is the most popular intellectual game in contemporary Japan, where it entertains between 10 and 20 million people. But between the 8th and 18th century many other variants of the game were invented in that country, some on smaller and some on larger boards.

The largest of all Japanese chess games (and generally the largest chess game in history) is *Taikyoku Shōgi* (more or less “Ultimate Chess”), in which the board is of size 36 by 36 (or 1296 squares in all) and every player has in the beginning an army of 402 men of 208 different types.

This is a table which contains the names of some of the men in *Taikyoku Shōgi* (in Japanese and in English translation), as well as the name of the man to which each of them promotes upon reaching one of the farthest 11 ranks of the board.

	Initial value		Promoted value
1.	_____ “Running Stag”	⇒	<i>honroku</i> _____
2.	_____ _____	⇒	<i>tōshō</i> “Sword General”
3.	<i>gyūhei</i> “Ox Soldier”	⇒	_____ _____
4.	_____ “Right General”	⇒	<i>ugun</i> _____
5.	_____ “Ox General”	⇒	<i>hongyū</i> _____
6.	<i>kyūhei</i> “Bow Soldier”	⇒	_____ “Bow General”
7.	<i>kisho</i> “Wood General”	⇒	_____ _____
8.	<i>dohei</i> “Crossbow Soldier”	⇒	_____ _____
9.	_____ _____	⇒	_____ “Dashing Horse”
10.	_____ “Left Chariot”	⇒	_____ _____
11.	_____ “Horse Soldier”	⇒	<i>sōba</i> _____
12.	<i>sōyū</i> “Running Bear”	⇒	_____ “Dashing Bear”
13.	<i>tonshō</i> “Pig General”	⇒	<i>honton</i> _____
14.	<i>tesshō</i> _____	⇒	<i>hakuzō</i> “White Elephant”
15.	_____ _____	⇒	<i>sagun</i> “Left Army”
16.	<i>usha</i> _____	⇒	<i>utessha</i> “Right Iron Chariot”
17.	_____ _____	⇒	<i>honrō</i> “Dashing Wolf”
18.	<i>sekishō</i> “Stone General”	⇒	_____ “White Elephant”

Fill the gaps.

Note: A bar above a vowel letter indicates length.

Problem by Ivan Derzhanski
for the Moscow Traditional Olympiad of Linguistics 2002/2003

Tupí and Guaraní

The Tupi-Guarani language family, widespread in the lowlands of South America, was very important in the history of the colonization of the continent. Among them, the most famous languages are Tupinambá (*old Tupi*), spoken along the Portuguese coast in the colonial times, and Guaraní, still spoken today in southern Brazil, Argentina, Uruguay and Paraguay (being co-official in the later). The table below shows some words in Tupinambá, their translations to English and their correspondents in Guaraní Mbya, one of the forms of the Guaraní language.

English	Tupinambá	Guaraní Mbya	English	Tupinambá	Guaraní Mbya
rock	itá	itá	to beat	petek	_____
soil	ybý	yvý	to hear	senub	_____
water	y	y	red	pyranga	_____
black	un	ũ	lizard	teju	_____
head	akanga	akã	I say	a'é	_____
to bring	erur	eru	beautiful	porang	_____
to hear	endub	endu	mouth	_____	juru
to experiment	sa'ang	ha'ã	half	_____	ku'a
you want	erepotár	erepotá	wood	_____	yvyrá
to heal	pueráb	kuerá	you stay	_____	erepytá
I sleep	aker	aké	high	_____	yvaté
boss	ubixab	_____	_____	_____	ereké
rib	arukang	_____	_____	jaguar	_____
to overcome	opuan	_____	_____	_____	potá
peanut	mandubi	_____			

1. Fill the blank spaces.

2. Below there are names of several cities in Brazil that are of Tupi origin, and their meanings in no particular order. Match the correspondences between the columns.

- | | |
|----------------------------|---|
| 1. Ibiúna (SP) | ___ (a) white soil |
| 2. Ibiporanga (SP) | ___ (b) great river |
| 3. Iúna (ES) | ___ (c) place for producing fishing hooks |
| 4. Tijuípe (BA) | ___ (d) lizard river |
| 5. Pindamonhangaba (SP) | ___ (e) red river |
| 6. Jacarecoara (MA) | ___ (f) turtle's burrow |
| 7. Ibitinga (SP) | ___ (g) sound the water does in the rock |
| 8. Jericoaquara (CE) | ___ (h) great rock |
| 9. Ipiranga (PR) | ___ (i) alligator's/yacare's burrow |
| 10. Tijuaçu (BA) | ___ (j) black soil |
| 11. (Usina de) Itaipú (PR) | ___ (k) black river |
| 12. Itatinga (SP) | ___ (l) fish of the yellow river |
| 13. Itauçu (GO) | ___ (m) beautiful land |
| 14. Pirajuí (SP) | ___ (n) big lizard |
| 15. (Foz do) Iguaçu (PR) | ___ (o) white rock |

Note: **y** represents the closed central unrounded vowel [ɨ]. **b** represents the bilabial fricative consonant [β]. ‘ represents the glottal pause [ʔ], like the pause in *uh-oh*.

Basque Numbers

Several multiplications have been written out in Basque. There are gaps in the last two lines.

$$\text{bi} \times \text{bi} = \text{lau}$$

$$\text{bi} \times \text{bost} = \text{hamar}$$

$$\text{bi} \times \text{hamar} = \text{hogei}$$

$$\text{hiru} \times \text{bost} = \text{hamabost}$$

$$\text{hiru} \times \text{hamar} = \text{hogeita hamar}$$

$$\text{bost} \times \text{bost} = \text{hogeita bost}$$

$$\text{bost} \times \text{zazpi} = \text{hogeita hama}$$

$$\text{bost zazpi} \times \text{bederatzi} = \text{hirurogeita hiru}$$

$$\text{zazpi} \times \text{hamar} = \text{hirurogeita hamar}$$

$$\text{lau} \times \text{bost} = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times \text{hamar} = \text{laurogeita hamar}$$

1. Fill in the gaps.

2. Write in figures:

a) laurogeita hamahiru =

b) hirurogei =

3. Write out in Basque:

c) 39 =

d) 77 =

e) 80 =

Note: The letter *s* has the sound of English *sh*, *z* of *s*, *tz* of *ts* in cats. The letter *h* is mute.

! Basque is spoken by 500,000 to 600,000 people in France and Spain and by about 170,000 people in South America. It has not been proven to be related to any other language.

Problem by Anna Pazelskaya
for the Moscow Traditional Olympiad of Linguistics 2001/2002

Icelandic Kinship

Guðrún Eriksdóttir Hrafnhildardóttir and Jakob Christiansson had three kids, from which they are very proud, for their successes and for all of them have given them grandsons or granddaughters. In order to celebrate their 70th wedding anniversary, the long-lived couple had a party with all their descendants: sons and daughters, grandsons and granddaughters, great-grandsons and great-granddaughters. Naturally, some of their sons-in-law and daughters-in-law, as well as grandsons-in-law and granddaughters-in-law, were also invited. Here is the list of all the people in the party:

Christian Kristínsson	Margret Steinunnardóttir Jakobsdóttir
Daniel Guðrúnarson Jakobsson	Ragnheiður Jakobsdóttir
Daniel Steinunnarson Þorarinssonar	Rakel Ragnheiðardóttir Bergmann
Eva Emilsdóttir Kvaran	Robert Bergmann Gunnarsson
Gunnar Gunnarsson	Sara Jakobs Þorarinssonar
Hrafn Kristínsson Viktorsson	Sigurður Jóns Bergmann
Ingimundur Sigurðarson Bergmann	Stefan Gunnarsson Gunnarssonar
Jakob Þorarinsson	Steinunn Jakobsdóttir
Jón Oddsson Bergmann	Viktor Danielsson Jakobssonar
Kristín Guðrúnardóttir Aronsdóttir	Viktória Viktorsdóttir

1. Among the participants, who is the older descendant of an immigrant?

2. Which of the sons/daughters of Guðrún and Jakob has no grandsons/granddaughters?

3. How many kids had Viktor? _____
4. How many kids had Steinum? _____
5. Which of the sons/daughters of Rakel didn't inherit any of her surnames?

6. Write five possibilities of name and surname for the son that Eva and Christian are waiting, knowing that his first name will be the same as the father of the pop singer Björk Guðmundsdóttir.

7. Steinunn liked very much his grandmother (mother of her mother), so that she gave her name to the daughter she had with Björn Annasson, before she married with her present husband. Give two possibilities for the name of this girl.

Note: **j** is pronounced as y in *you*; **Ð** and **ð** are pronounced as *th* in *this*.

Problem by Robson Carapeto
for the Brazilian Linguistics Olympiad 2013

Guaraní Verbs

The following Guaraní verb forms are listed along with their English translations.

<i>japyhyta</i>	We will be catching	<i>noñe'ëi</i>	He is not talking
<i>nohyvykõi</i>	He is not enjoying	<i>okororõ</i>	He is crying
<i>ombokapu</i>	He is shooting	<i>ndajajupirima</i>	We were not waking up
<i>pemomaitei</i>	You are greeting	<i>ahyvykõima</i>	I was enjoying
<i>ndokarumo'ãi</i>	He will not be eating	<i>añe'ëta</i>	I will be talking
<i>ndapevo'oima</i>	You were not taking	<i>namomaiteiri</i>	I am not greeting
<i>napekororõmo'ãi</i>	You will not be crying	<i>japurahei</i>	We are singing

1. Translate into English.

- a) *akaruma* _____
- b) *ojupita* _____
- c) *ndavo'omo'ãi* _____
- d) *napekororõi* _____
- e) *ndapyhyima* _____

2. Translate into Guaraní.

- f) You are not shooting _____
- g) He is not singing _____
- h) We will be eating _____
- i) I will not be singing _____

Notes: “you” is always plural in the sentences above. A squiggle over a vowel indicates that it is nasal (pronounced partly through the nose). The letter ñ is pronounced like the sound in the middle of “piñata” or “onion”. The letter y is pronounced like the “u” in “cut”. The letter j and the apostrophe (') are specific consonants. Guaraní is one of the official languages (along with Spanish) of Paraguay, where it is spoken by 94% of the population.

Problem by Bozhidar Bozhanov
for the North American Computational Linguistics Olympiad 2009

Toki Pona

Toki Pona is a constructed language, created in 2011 by the Canadian linguist Sonja Elen Kisa. Her aim was the language to be a minimal language, undervaluing the empty and abstract communication such as the ones of politicians and bureaucrats and pointing more directly to the concrete human life experiences. Therefore, the language makes use of only 123 words, with roots coming from different language families.

What follows is a list of some words and expressions in Toki Pona and, out of order, their English translations:

kiwen suno jelo, tomo tawa telo, jan Powi, ilo suno, telo jelo, jan ilo, jan toki, supa lape,
supa moku, ma tomo, wile moku, tawa, nasin linja, wile pona, telo kiwen, lipu toki, wile lawa,
linja lawa, tomo moku, linja kiwen

prophet, well-intentioned, hair, lantern, ice, robot, boat, thorn, hungry, Boris, book,
piss, city, bed, orthodoxy, movement, restaurant, dominant, dinner table, gold

1. Do the right associations between the words and translations.
2. Give the translation of all the simple Toki Pona words used in the compounded words and expressions of this problem.
3. How would you translate literally the name of the language?