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MALTA

Linguistics Olympiad

The Problem Solvers' Challenge

PRACTICE SESSION 1

Give yourselves around 1/2 hour per puzzle

PUZZLES

*Answer as many of the questions as you can: **read the instructions carefully.***

Use pen and paper to note down your observations as you work towards.

Puzzles

- | | |
|------------------------------|-------------------|
| 1. Where in the world? | Harold Somers |
| 2. Beja beasts | Dick Hudson |
| 3. People, animals and stuff | Babette Verhoeven |
| 4. Learning Dima | Daniel Lovsted |
| 5. Sauk it up | Ryan Chi |

Puzzle 1: Where in the world?

(20 points)

Tamazight is a family of closely related languages indigenous to North Africa, spoken across the region known in Arabic as the Maghreb, from Morocco in the west, across Algeria to Tunisia and Libya in the east and Mali in the south. The Tamazight are usually called "Berber" in English, though this is considered derogatory, being derived from the word meaning "barbarian".



Tamazight can be written using the Latin alphabet, but also uses the Tifinagh script, which dates back more than 2000 years, though it has been adapted for modern use. Tifinagh can be written both left-to-right or right-to-left, and vertically (bottom-up), with the orientation of (some of) the symbols altered accordingly. Here all examples are left-to-right. (Most of) The place names on the accompanying map of Tamazgha, and some that are not shown on the map for space reasons, are listed below, with their English equivalents in a different (random) order. Note that the English names are not always a direct transliteration of the Tamazight names, and in one case (the name of a capital city) quite different. **Note also that the map has north (shamal) at the bottom.** Country names are written in bold. The names in boxes are of larger areas.

- | | | | | | | | |
|----|---------------|----|--------|---|-------------------|---|-------------|
| 1 | ⵍⵓⵏⵓ ⵉⵙⵉⵎⵓⵔⵉⵙ | 14 | ⵏⵓⵓⵔⵉⵙ | A | Adrar des Ifoghas | N | Meknès |
| 2 | ⵓⵔⵏⵓⵙ | 15 | ⵉⵙⵓⵔⵉⵙ | B | Oran | O | Laayoune |
| 3 | ⵓⵓⵓⵔⵉⵙ | 16 | ⵓⵙⵓⵙ | C | Fez | P | Canaries |
| 4 | ⵓⵓⵓⵔⵉⵙ | 17 | ⵓⵙⵓⵙ | D | Toubkal | Q | Algiers |
| 5 | ⵓⵓⵓⵔⵉⵙ | 18 | ⵓⵓⵓⵔⵉⵙ | E | Timbuktu | R | Tripoli |
| 6 | ⵓⵓⵓⵔⵉⵙ | 19 | ⵓⵓⵓⵔⵉⵙ | F | Bechar | S | Marrakesh |
| 7 | ⵓⵓⵓⵔⵉⵙ | 20 | ⵓⵓⵓⵔⵉⵙ | G | Safi | T | Sousse |
| 8 | ⵓⵓⵓⵔⵉⵙ | 21 | ⵓⵓⵓⵔⵉⵙ | H | Tangiers | U | Rabat |
| 9 | ⵓⵓⵓⵔⵉⵙ | 22 | ⵓⵓⵓⵔⵉⵙ | I | Oujda | V | Constantine |
| 10 | ⵓⵓⵓⵔⵉⵙ | 23 | ⵓⵓⵓⵔⵉⵙ | J | Nouakchott | W | Gao |
| 11 | ⵓⵓⵓⵔⵉⵙ | 24 | ⵓⵓⵓⵔⵉⵙ | K | Tamanraset | X | Siwa |
| 12 | ⵓⵓⵓⵔⵉⵙ | 25 | ⵓⵓⵓⵔⵉⵙ | L | Annaba | Y | Agadir |
| 13 | ⵓⵓⵓⵔⵉⵙ | | | M | Tindouf | | |

1.	14.	A	Adrar des Ifoghas	N	Meknès
2.	15.	B	Oran	O	Laayoune
3.	16.	C	Fez	P	Canaries
4.	17.	D	Toubkal	Q	Algiers
5.	18.	E	Timbuktu	R	Tripoli
6.	19.	F	Bechar	S	Marrakesh
7.	20.	G	Safi	T	Sousse
8.	21.	H	Tangiers	U	Rabat
9.	22.	I	Oujda	V	Constantine
10.	23.	J	Nouakchott	W	Gao
11.	24.	K	Tamanraset	X	Siwa
12.	25.	L	Annaba	Y	Agadir
13.		M	Tindouf		

- Match up the names
- How is the Tamazight name for the Mediterranean Sea (ⵍⵎⵉⵔⵉⵏ ⵏ ⵓⵙⵔⵓⵏⵉⵔ) pronounced?
- And the Atlas Mountains (ⵙⵍⵓⵎⵓⵙ ⵏ ⵓⵙⵔⵓⵏⵉⵔ)?
- Give an alternative transcription for ⵓⵙⵔⵓⵏⵉⵔ based on the data.
- What about the Hoggar Mountains (ⵙⵍⵓⵎⵓⵙ ⵏ ⵓⵔⵓⵔⵓⵏⵉⵔ)?
- What do we call the two regions that in Tamazight are called (a) ⵙⵓⵔⵓⵏⵉⵔ and (b) ⵓⵙⵔⵓⵏⵉⵔ?

Puzzle 2: Beja beasts

(15 points)

Beja is spoken by about a million people in the north of the Sudan and neighbouring countries. Many Beja speakers are nomads living on and with herds of camels and other animals. The language is distantly related to Ancient Egyptian and Arabic; it is rarely written so it has no standard writing system. Here are some sentences in Beja with their English translations.

<i>yaas diwiini</i>	A dog sleeps.
<i>yaas rihiini</i>	He sees a dog, or A dog sees.
<i>uuyaas diwiini</i>	The dog sleeps.
<i>ooyaas rihiini</i>	He sees the dog.
<i>yaasuuk diwiini</i>	One of your dogs sleeps.
<i>yaasook rihiini</i>	He sees one of your dogs.
<i>iyaasuuk diwiini</i>	Your dog sleeps.
<i>iyaasook rihiini</i>	He sees your dog.
<i>ooyaas idiwiini rihiini</i>	He sees the dog which sleeps.
<i>uuyaas irihiiniuuk diwiini</i>	The dog which sees you sleeps.

Here is some more vocabulary:

<i>tak</i> = man	<i>kaam</i> = camel	<i>meek</i> = donkey
<i>bit-</i> = pull	<i>tam-</i> = eat	<i>giig-</i> = go

1. Translate into English

- (a) *utak kaam rihiini*

- (b) *ikaamook bitiini*
- (c) *meeek giigiini*
- (d) *takuuk tamiini*
- (e) *uutak ibitiiniuuk diwiini*
- (f) *takuuk ookaam ibitiiniook rihiini*

2. Translate into Beja

- (a) A man goes.
- (b) The camel sees the donkey.
- (c) The donkey sleeps.
- (d) The man who eats sees the camel.
- (e) He eats one of your donkeys.
- (f) The donkey which eats sees the camel which pulls you.

Puzzle 3: People, animals and stuff (25 points)

The Garifuna language is spoken by people of African and South American indigenous descent in four Central American countries: Belize, Honduras, Guatemala, and Nicaragua with a total of approximately 200,000 speakers.

1. On the left are some Garifuna phrases, and on the right their translations, but in a random order. Match the Garifuna to the correct English translation given in the right column.

1	<i>guchi</i>	a	women
2	<i>biyama uguchinya</i>	b	those fast fathers
3	<i>uguchinya furesetinya</i>	c	all those fast fathers
4	<i>uguchinya furesetinyaha</i>	d	the woman's fathers
5	<i>sunuguchinya furesetinyaha</i>	e	two fathers
6	<i>tuguchinya wuri</i>	f	fast fathers
7	<i>wurinya</i>	g	father

Here are some more Garifuna phrases matched with their **correct** English translation:

1	<i>biyama tirahunyu irufuntinyu</i>	a	her two good children
2	<i>sunfaluma bimetiha</i>	b	all those sweet coconuts
3	<i>uruwa baruru</i>	c	three plantains (=kind of banana)
4	<i>baruru wurigiru</i>	d	a green (unripe) plantain
5	<i>bagasu harutinyu</i>	e	white cows
6	<i>ownli harutinya</i>	f	white dogs
7	<i>townli</i>	g	her dog
8	<i>dubu irufuntiha</i>	h	those good stones
9	<i>biyama wewe gagubuti</i>	i	two tall trees

And here is some more vocabulary:

huru 'crab' *ibiri* 'brother' *ganyen* 'egg' *hinyaru* 'girl'
wuguri 'man' *safuru* 'horse' *bimeti* 'sweet'

2. Translate the following phrases into Garifuna:

- (a) her brothers
- (b) fast children
- (c) all those good eggs
- (d) white crabs
- (e) those sweet plantains
- (f) three tall men
- (g) the girl's horses

Puzzle 4: Learning Dima

(20 points)

Dima is an endangered language spoken in southwestern Ethiopia with only 574 speakers at the last count (2007).

Here are six sentences in Dima. The first five are given along with their English translations. Dima does not have a standardized written form, and the spelling here has been simplified somewhat.

<i>guarafis kenim deisin</i>	The crocodiles killed them.
<i>ate gudumubim goshtu ollox kubit</i>	I carried a tall man slowly.
<i>chuqqind wudur saamisim yefin</i>	A small girl saw the eagle.
<i>daxidis zimaf sanubim ziti olox dixin</i>	The strong chiefs cooked a black ox quickly.
<i>kete kitimindim amzi koxin</i>	They loved a selfish woman.
<i>gudumidis amzaf daxubim guur kubin</i>	

1. Translate the last sentence into English.

2. The six sentences below were uttered by a linguist who had been trying to learn Dima. Unfortunately, only three of them were fully understood by native Dima speakers; the other three contained grammatical mistakes.

For each of the following six sentences, choose from the options provided to convert it into a grammatically correct Dima sentence. (Remember that three of the sentences are already grammatically correct: for these three sentences, you should choose option A.) For every sentence, only one option will successfully produce a correct Dima sentence.

- I. *ate sanubim saam koxin*
A. The sentence is correct as is (change nothing).
B. Change *koxin* to *koxit*
C. Change *sanubim* to *sanidim*
D. Change *saam* to *saamaf*

- II. *gudumid wuduraf kitimisim zim olox kubin*
A. The sentence is correct as is (change nothing).
B. Change *gudumid wuduraf* to *guduaf wudurid*.
C. Change *kubin* to *kubit*.
D. Change *olox* to *amzi*.

- III. *goshtu dax zitafisim yefin*
A. The sentence is correct as is (change nothing).
B. Change *goshtu dax* to *goshtafis dax*.
C. Change *zitafisim* to *zitidim*.
D. Change *dax zitafisim* to *daxidisim zitaf*

- IV. *wuduris sanisubim guur deisin*
A. The sentence is correct as is (change nothing)
B. Change *wuduris* to *wudurid*.
C. Change *sanisubim* to *sanubisim*.
D. Change *sanisubim* to *sanisim*.

- V. *chuqqubis goshtu kenim yefin*
A. The sentence is correct as is (change nothing).
B. Change *goshtu kenim* to *goshtaf kete*.
C. Change *chuqqubis* to *chuqqisub*.
D. Change *yefin* to *yefit*.

- VI. *kete saamim ollox dixin*
A. The sentence is correct as is (change nothing).
B. Change *ollox* to *amzi*.
C. Change *saamim* to *saam*.
D. Change *kete* to *kenim*.

3. Translate the corrected versions (or the original versions, for the sentences that were already correct) of the six sentences above into English.

Puzzle 5: Sauk it up

(25 points)

Sauk is an Algonquian language spoken by members of the 3,000-strong Sac and Fox Nation. Forced to relocate in the 19th century from Wisconsin to central Oklahoma, they have adapted their language to the times, coining words for a wide range of modern concepts.



Here are some Sauk words with their English translations in random order.

1.	<i>achimowa</i>	A.	capital city
2.	<i>anemoha</i>	B.	computer
3.	<i>anemoheha</i>	C.	dog
4.	<i>chitapikaneki</i>	D.	Ferris wheel (pictured)
5.	<i>chitapiwa</i>	E.	horse
6.	<i>kokenikaneki</i>	F.	laundry
7.	<i>mehiko withenikaneki</i>	G.	library
8.	<i>meshitetepithoni</i>	H.	lounge
9.	<i>meshiteneki</i>	I.	metal
10.	<i>methenahikanani achimoni</i>	J.	Mexican restaurant
11.	<i>methenahikani</i>	K.	newspaper
12.	<i>methenahikanikaneki</i>	L.	oats / hay
13.	<i>piwapehkwi</i>	M.	paper
14.	<i>piwapehkwi achimoni</i>	N.	puppy
15.	<i>piwapehkwi winetepi</i>	O.	roller skates
16.	<i>tetepithonani mahkathehani</i>	P.	telephone
17.	<i>toskasha</i>	Q.	to sit
18.	<i>toskashi witheniweni</i>	R.	to tell

- Determine the correct correspondences.
- Translate the following into English (a) *toskasheha*, (b) *kokenewa*
- What are the Sauk words for (a) 'brain', (b) 'shoe shop'?

END OF PAPER