

# Online Olympiad in Linguistics 2021

## Solutions & Grading Scheme

### 1. Thai

In the clips featured in this problem, the Thai pronouns are used as follows:

- **gae** is used derogatorily.
- **kun** is used in a professional context.
- **taan** is used to address a person of higher status.
- **ter** is used informally.

Clip	Answer
A judge talks to a person in court	<b>kun</b>
A man talks to a high-ranking official	<b>taan</b>
A person aggressively challenges another person to a fight	<b>gae</b>
A reporter attempts to revive a woman who has collapsed	<b>kun</b>
A woman says something to a man in an informal setting	<b>ter</b>
A monk makes a request of a person of high standing	<b>taan</b>

### Grading

Each correct answer is worth 4 points. Total score is capped at 20 points.

### 2. Wari

In Wari, there are three genders: *feminine* (human females), *masculine* (human males and some animals), and *neuter* (other animals and inanimate objects). Some nouns can also function as adjectives or predicates (see below).

Word	Gender	Meaning as a noun	Meaning as an adjective/predicate
<b>homa</b>	<i>neuter</i>	fat	fat
<b>kaxima-</b>	<i>neuter</i>	foot	
<b>kima-</b>	<i>neuter</i>	chest	
<b>kopakaoq</b>	<i>masculine</i>	jaguar	
<b>mata</b>	<i>neuter</i>	sleep	sleepy
<b>mijak</b>	<i>neuter</i>	pig	
<b>narimaq</b>	<i>feminine</i>	woman	

Word	Gender	Meaning as a noun	Meaning as an adjective/predicate
<b>pijeq</b>	<i>feminine or masculine</i>	child (girl or boy)	
<b>qopa</b>	<i>neuter</i>	strength	strong
<b>qoromijak</b>	<i>masculine</i>	dog	
<b>tapara-</b>	<i>neuter</i>	arm	
<b>taramaq</b>	<i>masculine</i>	man	
<b>tarawana-</b>	<i>neuter</i>	liver	
<b>waram</b>	<i>neuter</i>	monkey	

Possession in Wari is expressed by putting the possessor noun (if any) after the possessed noun, and suffixing the possessed noun accordingly:

Suffix	Possessor
—	first person
<b>-m</b>	second person
<b>-kon</b>	third person masculine
<b>-kam</b>	third person feminine
<b>-in</b>	third person neuter

Adjectives (and nouns serving as adjectives) precede the noun they describe. Adjectives and noun-adjectives take the same suffix as they would if they were a noun possessed by the noun they describe (third person masculine, feminine, or neuter).

Adjective	Meaning
<b>orowaji-</b>	immature
<b>wiji-</b>	small
<b>xokori-</b>	young

Adjectives in the predicate position are suffixed to mark the gender of the subject. Nouns serving as adjectives, on the other hand, are not suffixed for subject gender when they are in the predicate position. Neither are verbs.

Verb	Meaning
<b>kaog</b>	eat
<b>tatamq</b>	laugh
<b>tok</b>	drink

Sentence structure:

Sentence type	Gender of subject	Structure				
affirmative	all	—		predicate	subject	
negative	masculine	Qom ka				na
	feminine					ka
	neuter					kama
copular	masculine	Mon	kwaq	—		
	feminine	Mam				
	neuter	Main	kaq			

(a):

1	This is the girl.	<i>Mam kwaq pijeq.</i>
2	My arm is strong.	<i>Qopa na tapara.</i>
3	His chest is fat.	<i>Homa na kimakon.</i>
4	This is the sleepy pig.	<i>Main kaq matain mijak.</i>
5	The dog's liver is not fat.	<i>Qom ka homa ne tarawanakon qoromijak.</i>
6	The woman is young.	<i>Xokorikam na narimaq.</i>
7	This is your foot.	<i>Main kaq kaximam.</i>
8	The boy is not sleepy.	<i>Qom ka mata ka pijeq.</i>
9	The pig did not eat.	<i>Qom ka kaoq ne mijak.</i>
10	The man is small.	<i>Wijikon na taramaq.</i>
11	The jaguar drank.	<i>Tok na kopakaoq.</i>
12	The immature girl ate.	<i>Kaoq na orowajikam pijeq.</i>
13	This is the young boy.	<i>Mon kwaq xokorikon pijeq.</i>
14	The strong woman did not laugh.	<i>Qom ka tatamq kama qopakam narimaq.</i>
15	This is the monkey's fat arm.	<i>Main kaq homain taparain waram.</i>

(b):

<i>Main kaq matain mijak.</i>	This is the sleepy pig.
	This is the pig's sleep.

Grading

- Task (a): 1 point is deducted for each incorrect, missing, or superfluous word, as well as for two adjacent words transposed. The maximum score is 2 points for sentences #5, #14, and #15, and 1 point for the rest of the sentences.
- Task (b): 2 points are awarded for the correct answer; 1 point is awarded if the choice of a sentence is correct.

### 3. Turkish Bird Language

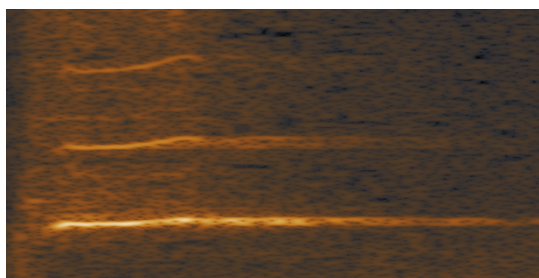
The middle part of each whistle corresponds to the middle part of each word—the vowel. The higher the pitch, the *brighter* and *higher* the vowel ( $i > e > a$ ): that is, the tongue is positioned both further to the front and closer to the roof of the mouth. However, the vowels in recordings 8 (*biz*) and 9 (*geç*) are articulated very similarly and are therefore quite hard to distinguish.

The consonants that occur in the problem can be divided into three categories based on their place of articulation: dorsal (*k, g*), coronal (*t, d, n, r, s, z, ç*), or labial (*b*). Each of these categories has its own specific “locus”: that is, the initial (for initial consonants) or final (for final consonants) pitch level relative to the vowel. In other words, consonants determine the pitch contour:

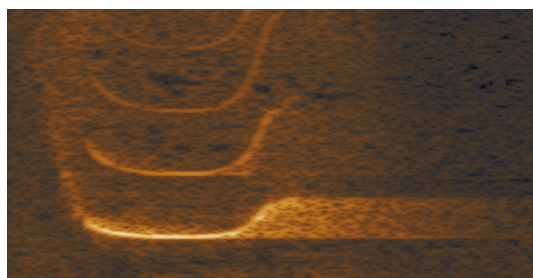
- *k* and *g* correspond to a flat pitch contour: there is virtually no change in pitch preceding or following the vowel.
- *b* occurs only as an initial consonant and corresponds to a rising pitch contour.
- *t, d, n, r, s, z,* and *ç* correspond to a falling pitch contour when they are initial consonants; when they are final consonants, they correspond to a rising pitch contour. The sibilants *s, z,* and *ç* retain their “hissing” sound quality in their whistled form.

The answers to the problem are given below. For reference, each answer is supplemented by a spectrogram (a visual representation of the relevant recording).

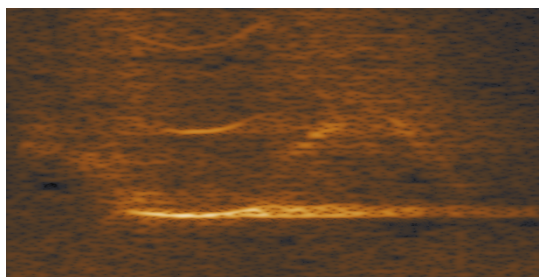
#1: **kek**



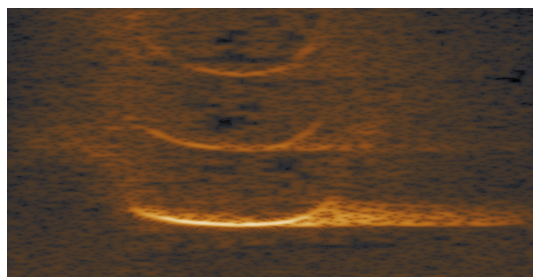
#2: **dar**



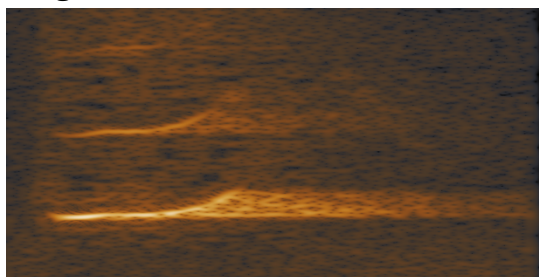
#3: **siz**



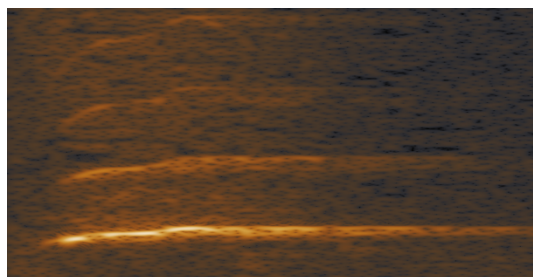
#4: **sen**

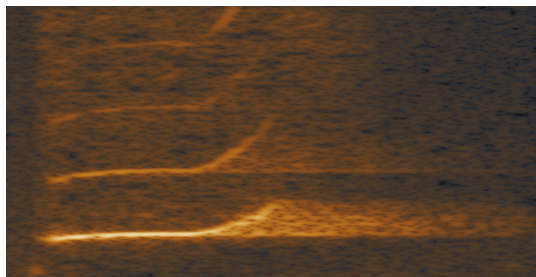
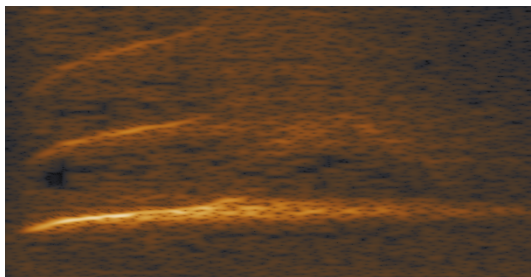
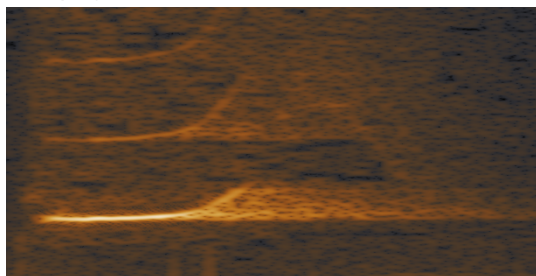
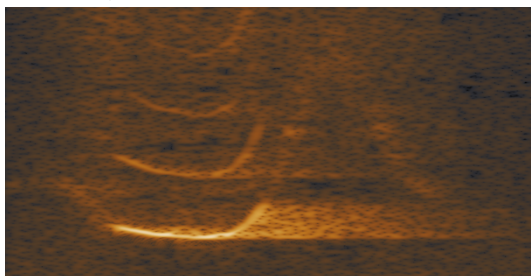


#5: **git**



#6: **bak**



#7: **kar**#8: **biz**#9: **geç**#10: **saç**

### Grading

- Each correct answer is worth 2 points.
- If *biz* is used instead of *geç*, 1 point will be awarded.
- If *geç* is used instead of *biz*, 1 point will be awarded.

## 4. Urhobo

Each syllable of every Urhobo noun has a property called *tone*. The tone may be high (H) or low (L), marked as ´ and ` respectively.

<b>ègbèdé</b>	LLH	needle
<b>èràvè</b>	LLL	animal, meat
<b>ítábà</b>	HHL	tobacco
<b>ívìrì</b>	HLL	smoke
<b>ódìbó</b>	HLH	banana
<b>ógbá</b>	HH	hero

<b>ágógó</b>	HHH	bell
<b>èní</b>	LL	elephant
<b>èrákò</b>	LHL	dog
<b>èvé</b>	LH	goat
<b>ìrìbó</b>	LHH	pepper
<b>úkpè</b>	HL	bed

**re** does not have its own tone, but instead raises the following tone: if the initial tone of the word following **re** is L, it becomes H. Similarly, **ke** does not have its own tone, but instead raises the preceding tone: if **ke** follows a word which ends in L, that tone becomes H.

The base pitch level is 1 for a high tone and 4 for a low tone. However, after each sequence of one or more high tones followed by one or more low tones (e.g., HLL, HHHLL, etc.) the pitch level increases incrementally by 1.

Phrase	Tones	Pitch levels	Answer
eni re ukpe	LL HL	44 14	1 4
ke eve ke eve	LH LH	41 42	4 2
ke agogo ke agogo	HHH HHH	111 111	1 1 1
iviri re egbede re ukpe	HLL HLH HL	144 253 36	3 6
ukpe re erave re ogba re iribo	HL HLL HH HHH	14 255 33 333	3 3 3
ke erako re eni ke erako re eni	LHL HH LHL HL	414 22 536 47	4 7
ke iribo re erako ke iribo re erako	LHH HHH LHH HHL	411 111 422 225	2 2 5

### Grading

- Each correct answer in (a) is worth 1 point.
- Each correct answer in (b) is worth 2 points. There is no partial credit.