

<1> A Cat in a Hat¹ (1/2)

24 points

Chintang (Chintang: छिन्ताङ् Chintāṅ / Chhintang) is an eastern Kiranti language spoken by 5,000 to 6,000 people in Chhintang and Ahale municipalities of Dhankuta District, Koshi Zone, Nepal. Its dialects are Mulgaun and Sambhugaon. A few of the characters used to represent the words in this language may be unfamiliar. ʔ is a glottal stop, the sound heard in the middle of “uh-oh”. ŋ is the sound made by the ng in *sing*. ʌ is the sound made by the o in *won*.

Below are 16 sentences in Chintang written in the International Phonetic Alphabet, and their unordered English translations:

1	cuwa uthurumbeʔ yuŋno	a.	There is a hole in the towel.
2	appa chintaŋbeʔ yuŋno	b.	The woman has gone away.
3	sencak sie	c.	The rice has been cooked.
4	wapaŋa topi wadaŋse	d.	There is a hat on the head.
5	kok thuktaŋse	e.	My mother-in-law slept.
6	ram hariniŋ khoŋno	f.	You go to the market.
7	kʌp kedadaŋse	g.	The water is in his mouth.
8	taŋbeʔ topi yuŋno	h.	Joge sent a letter.
9	menwaŋa sencak sede	i.	The mouse died.
10	tawelbeʔ uhoŋ yuŋno	j.	The woman has bought a chicken.
11	anambaŋa cuwa thuŋno	k.	The cup has been broken.
12	mechacha khadaŋse	l.	My father is in Chintang.
13	jogeŋa citthi hakte	m.	The rooster has put on a hat.
14	anamma imse	n.	A cat killed a mouse.
15	hana bajar akhaʔno	o.	Ram plays with Hari.
16	mechachaŋa wa khedoŋse	p.	My father-in-law drinks water.

Task 1. Match the Chintang sentences (1-16) with their corresponding English translation (a-p).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

¹ Created by Aleka Blackwell.

<1> A Cat in a Hat (2/2)**Task 2.** Translate into Chintang.

a. There is a cat in a hat.	
b. Joge plays with a chicken.	
c. My hen is in the market.	
d. parent-in-law	

Task 3. Translate these Chintang sentences into English.

e.	athurumbe? kok yuŋno	
f.	appa khade	
g.	anamma ammanŋ yuŋno	

<2> Stressed out in the Caribbean² (1/1) 13 points

Papiamentu is a Portuguese creole with many words taken from other European, African and local languages, spoken in the Netherlands Antilles, and recognised there as one of the official languages.

In the list of words below, the stressed syllable is underlined. Where there is no underlining, the stress is even.

<u>apel</u>	<i>apple</i>	kar <u>son</u>	<i>trousers</i>	bu <u>riku</u>	<i>donkey</i>	sinta	<i>to sit</i>
awer <u>o</u>	<i>to see</i>	kome	<i>to eat</i>	falta	<i>to lack</i>	<u>sombré</u>	<i>hat</i>
<u>bèrdè</u>	<i>green</i>	ma <u>kamba</u>	<i>white man</i>	hospi <u>tal</u>	<i>hospital</i>	yongot <u>á</u>	<i>to kneel</i>
bò <u>ter</u>	<i>bottle</i>	re <u>tené</u>	<i>to hold back</i>	<u>kachó</u>	<i>dog</i>		

Task. For each of the words listed below, indicate which syllable is stressed counting syllables from beginning of the word, e.g., *hospital* has 3 syllables (*hos pi tal*) with the stress on syllable 3; *buriku* also has 3 syllables (*bu ri ku*), but with stress on syllable 2. Answer by writing the number of the stressed syllable in each of these words. If a word has *even* stress, put a cross 'X' in the box.

a	barbulèt	<input type="checkbox"/>	butterfly	n	kunuku	<input type="checkbox"/>	farm
b	barbulètè	<input type="checkbox"/>	butterfly	o	manteca	<input type="checkbox"/>	butter
c	buki	<input type="checkbox"/>	book	p	maribomba	<input type="checkbox"/>	wasp
d	chògògò	<input type="checkbox"/>	flamingo	q	orkan	<input type="checkbox"/>	hurricane
e	còrá	<input type="checkbox"/>	red	r	oyevar	<input type="checkbox"/>	stork
f	descansá	<input type="checkbox"/>	to rest	s	pelican	<input type="checkbox"/>	pelican
g	encargá	<input type="checkbox"/>	to blame	t	pretu	<input type="checkbox"/>	black
h	hòmber	<input type="checkbox"/>	man	u	primintí	<input type="checkbox"/>	to promise
i	investigá	<input type="checkbox"/>	to investigate	v	refresco	<input type="checkbox"/>	soda
j	kamna	<input type="checkbox"/>	to walk	w	siudat	<input type="checkbox"/>	city
k	keshi	<input type="checkbox"/>	cheese	x	skirbi	<input type="checkbox"/>	to write
l	kontestá	<input type="checkbox"/>	to answer	y	sòru	<input type="checkbox"/>	to care
m	kòrda	<input type="checkbox"/>	to remember	z	tribon	<input type="checkbox"/>	shark

² Created by Harold Somers. Main sources: <http://www.narin.com/papiamentu/vocab.html>, and <https://en.wikipedia.org/wiki/Papiamentu>

<3> Let that Mongo!³ (1/3)

12 points

Mongo (also known as Nkundo or Lomongo) is a Bantu language spoken by the Mongo Peoples of the central Democratic Republic of the Congo. Presently, there are around 400,000 native speakers of this language spread out over a large area around the Congo river.

Below is a table showing some verb forms in Lomongo. The imperative form is used to give an order; the 2nd sg verb form is used when it means 'you (one person) do something'; 3rdsg. form is used to say 'he/she do something'; 3rd pl. form is used to say 'they do something'.

	<i>imperative</i>	<i>2nd sg.</i>	<i>3rd sg.</i>	<i>3rd pl.</i>	<i>English</i>
1	bota	oota	aota	baota	'beget'
2	kamba	okamba	akamba	bakamba	'work'
3	imed̥ʒa	wimed̥ʒa	imed̥ʒa	bimed̥ʒa	'consent'
4	usa	wusa	usa	busa	'throw'
5	bata	oata	aata	baata	'get'
6	ɛna	wɛna	ɛna	bɛna	'see'
7	isa	wisa	isa	bisa	'hide'
8	d̥ʒila	od̥ʒila	ad̥ʒila	bad̥ʒila	'wait'
9	ina	wina	ina	bina	'hate'
10	bina	oina	aina	baina	'dance'
11	asa	wasa	asa	basa	'search'
12	sanga	osanga	asanga	basanga	'say'

NOTES: [d̥ʒ] is a consonant pronounced like the [j] in the English word *jump*. [ŋ] is a consonant pronounced like the [ng] and the end of the English word *sing*.

One linguist has proposed an explanation to account for each of these verb forms. He has proposed a single set of prefixes that attach to each verb depending on whether it is *imperative* or not, and whether it has a 'you', 'he/she' or 'they' meaning subject.

Here is the set of proposed prefixes:

<i>imperative</i>	<i>2nd sg.</i>	<i>3rd sg.</i>	<i>3rd pl.</i>
∅-	o-	a-	ba-

Note: ∅ indicates 'no prefix' on the *imperative* form of verbs.

³ Created by Kevin Liang.

<3> Let that Mongo! (2/3)

You will have noticed that the addition of these prefixes to the imperative verb form, i.e., the one without a prefix, produces *some* correct verb forms (i.e. ones corresponding to those given in the first table), other verbs end up with incorrect forms.

Task 1: Circle the number corresponding to each set of correct verb forms generated when these prefixes are attached to the base form (i.e. the imperative verb form).

1 2 3 4 5 6 7 8 9 10 11 12

As you would expect, the linguist who proposed this set of prefixes for all the verbs needed to explain what *additional* processes were required to generate all correct forms. So the following *three* processes were proposed to apply *after* the prefixes are attached, when these stipulated conditions are met.

- A) if there is a [b] between two vowels (or more simply if there is a vowel before a [b]), then the [b] is deleted
- B) if there is an [o] before another vowel, then change the [o] to a [w]
- C) if there are two consecutive vowels, then the first vowel is deleted

However, the application of these processes (or 'rules') failed to generate only correct forms *unless* applied in a strict order.

Task 2: In what order *must* these rules be applied to assure that *only* correct verb forms are generated? Put a cross in the cell under the correct order of the rules A to C that our linguist must have stipulated in order to derive only correct verb forms.

ABC	BCA	CAB	BAC	CBA	ACB

<3> Let that Mongo! (3/3)

Task 3: Applying our linguist's insights, fill in the blanks (1-19). Write your answers in the chart below.

<i>imperative</i>	<i>2nd sg.</i>	<i>3rd sg.</i>	<i>3rd pl.</i>	<i>English</i>
bakisa	(1)	(2)	(3)	'add'
(4)	wanda	(5)	(6)	'begin'
solola	(7)	(8)	basolola	'chat'
ponama	(9)	aponama	(10)	'elect'
(11)	oowa	(12)	(13)	'cure'
(14)	(15)	aalusa	(16)	'turn'

ANSWERS

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16		

<4> Old Persian Cuneiform⁴ (1/2)**15 points**

Old Persian, one of the two attested Old Iranian languages, was spoken from 600-300 CE in Achaemenid Persia. Persian is distantly related to English; both languages belong to the Indo-European language family. Old Persian was written in cuneiform, a writing system produced using wedge-shaped marks in clay tablets inherited from the Sumerian Empire.

Below are some words in Old Persian Cuneiform. Note that one word is written in *two* different ways in cuneiform.

Table 1. Old Persian words in Cuneiform

1. 𐎠 𐎡	14. 𐎠 𐎡 𐎢 𐎣
2. 𐎢 𐎣 𐎤 𐎥 𐎦	15. 𐎠 𐎡
3. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧	16. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧
4. 𐎢 𐎣 𐎤	17. 𐎢 𐎣 𐎤
5. 𐎢 𐎣 𐎤 𐎥 𐎦	18. 𐎢 𐎣 𐎤 𐎥 𐎦
6. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧	19. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧
7. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧 𐎨	20. 𐎢 𐎣 𐎤 𐎥 𐎦
8. 𐎢 𐎣 𐎤 𐎥	21. 𐎢 𐎣
9. 𐎢 𐎣 𐎤 𐎥 𐎦	22. 𐎢 𐎣 𐎤 𐎥 𐎦
10. 𐎢 𐎣 𐎤 𐎥	23. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧
11. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧	24. 𐎢 𐎣 𐎤 𐎥
12. 𐎢 𐎣 𐎤 𐎥 𐎦	25. 𐎢 𐎣 𐎤 𐎥 𐎦 𐎧
13. 𐎢 𐎣 𐎤 𐎥	26. 𐎢 𐎣 𐎤 𐎥

Table 2. Old Persian words in Roman script with their unordered English translations

A. <i>paruvam</i>	previously	N. <i>Kuruš</i>	Cyrus
B. <i>hadugā</i>	record, statue	O. <i>asmā</i>	sky
C. <i>āyadana</i>	sanctuary	P. <i>Bagadāta</i>	(a male name) ¹
D. <i>dāruv</i>	wood	Q. <i>Hiduš</i>	India
E. <i>duruxta</i>	lie	R. <i>hača</i>	from
F. <i>Čispaiš</i>	Teispes (a king of Persia)	S. <i>bājim</i>	tribute, toll
G. <i>saiymam</i>	silver	T. <i>Arabāya</i>	Arabia
H. <i>bar</i>	to bear	U. <i>Haraiva</i>	(a female name)
I. <i>Skudra</i>	Thrace	V. <i>daiva</i>	false god
J. <i>baga</i>	god	W. <i>Uvjā</i>	Elam (a place name)
K. <i>pasāva</i>	after	X. <i>hakaramčiy</i>	once
L. <i>Ākaufaciyā</i>	a tribe of southeastern Iran	Y. <i>Dārayauš</i>	Darius (a king of Persia)
M. <i>radīy</i>	because of		

¹ Equivalent to the Greek name *Theodoros* 'god-given'.

⁴ Created by Ethan Chi.

<4> Old Persian Cuneiform (2/2)

Task 1: Match the words written in cuneiform from Table 1 with those written in roman characters in the second table. Write the letter (A-Z) preceding a word in Table 2 to the right of the number preceding the same word in Table 1.

1		5		9		13		17		21		25	
2		6		10		14		18		22		26	
3		7		11		15		19		23			
4		8		12		16		20		24			

Task 2: Below are several possible Old Persian words. Given that none of the true words contain diphthongs (i.e., a sequence of two vowels as in Čispais), place a cross in the box to the right of the numbers corresponding to the 'true' Old Persian words in this list. Note that 'y' is a consonant, it is *not* a vowel.

1	
2	
3	
4	
5	
6	

1.	𐎧 𐎥 𐎠 𐎡 𐎧 𐎠
2.	𐎧 𐎠 𐎡 𐎧 𐎠 𐎡
3.	𐎧 𐎡 𐎧 𐎠 𐎡
4.	𐎧 𐎠 𐎡 𐎧 𐎠 𐎡
5.	𐎧 𐎡 𐎧 𐎠 𐎡 𐎧
6.	𐎧 𐎡 𐎧 𐎠 𐎡 𐎧

<5> Password Confusion⁵ (1/3)**15 points**

Mary, Larry, and Harry are three friends sharing an apartment. Unfortunately, their nosy neighbor Perry is always trying to use their wifi, so Mary changes their wifi password frequently to thwart Perry's efforts. Whenever she changes the password, Mary texts the new password to Larry and Harry.

One day, Mary opens their wifi bill and can tell from the exorbitant charge that Perry has been using it again. Since this can only mean that Perry is somehow reading their texts, Mary hires a company called the Rearranging Expressions Organization (or REOrganization for short) to give her advice on making her messages more secure. REOrganization advises her to send messages that can be decoded by the following 2-step process:

1. Convert the sentence to a question.
2. Read the first letter of each word in the question to yield the password.

As it turns out, Larry and Harry are not very inquisitive people, so they have never encountered questions before. Therefore, Mary gives them the following example messages to show how the system works:

Text message	Text message converted to a question	Decoded password
Deciphering each Alaskan license plate abbreviation is lovely.	Is deciphering each Alaskan license plate abbreviation lovely?	IDEAL PAL
A new German exchange rate beneath a newspaper did assist national ambassadors.	Did a new German exchange rate beneath a newspaper assist national ambassadors?	DANGER BANANA
Every industrial geographer hired through your legal action was yelling enthusiastic random stuff.	Was every industrial geographer hired through your legal action yelling enthusiastic random stuff?	WEIGHTY LAYERS

Why have this extra step of forming a question? The idea is that the initial letters from the original text messages can also spell two-word chunks (DEAL PAIL, ANGER BANDANA, and EIGHTY LAWYERS), so perhaps Perry will be thrown off the scent by these distractor phrases.

Task 1. Larry and Harry both seemed to understand the examples Mary showed them, so she began using this system to encode the new passwords. It went swimmingly for the first few weeks, but then Larry and Harry occasionally began to get the password wrong. Below are all of the messages Mary sent out, along with the passwords that her roommates extracted from the messages. A few cells of the table have been left blank; fill them in.

⁵ Created by By Tom McCoy.

<5> Password Confusion (2/3)

Text message	Distractor password	Larry's password guess	Harry's password guess	Correct password
Uplifting tales told extremely rapidly in New Guinea and Romania may reveal each storyteller's trade secrets.	UTTERING ARMRESTS	MUTTERING ARRESTS	MUTTERING ARRESTS	MUTTERING ARRESTS
Lively orangutans using discarded branches as tambourines can harmonize.	LOUD BATCH	CLOUD BATH	CLOUD BATH	CLOUD BATH
Horned owls should endure every modern orange tree iguanas can offer next summer.	HOSE EMOTICONS	CHOSE EMOTIONS	SHOE EMOTICONS	SHOE EMOTICONS
Every loud electronic creature that interesting odd numbers should provide at reunions should escape.	ELECTION SPARSE	SELECTION SPARE	SELECTION PARSE	SELECTION SPARE
Alligators that can launch airplanes may prosper.	AT CLAMP	MAT CLAP	CAT LAMP	MAT CLAP
Unions should identify novel geometric systems that one may possibly seek.	USING STOMPS	MUSING STOPS	SUING STOMPS	SUING STOMPS
Happy animals that will investigate telescopes can hop.	HAT WITCH	?	?	?
All North Dakotan devilled eggs should seem especially radiant today.	AND DESSERT	?	?	?
Aardvarks may publicly label each spanning tree algorithm talented unicorns should enthusiastically see.	AMPLE STATUSES	?	?	?
Anyone rabbits might surprise has elicited a response that has satisfied.	ARMS HEARTHES	?	?	?

<5> Password Confusion (3/3)

Mary does not want all this confusion about the password scheme, so she switches to a different encoding scheme: She will still send out a message, but her roommates will now need to negate the message so that it means the opposite of its original meaning, rather than turning it into a question as they had done before.

Shockingly, Larry and Harry are such positive people that they have never encountered negation before, so Mary sends them the following examples of how the encoding scheme works:

Text message	Negated text message	Decoded password
Charming refrigerator operators will waltz into Greenland	Charming refrigerator operators will not waltz into Greenland.	CROWN WIG
Quiet utilitarians in crowded Kenyan city halls are talking.	Quiet utilitarians in crowded Kenyan city halls are not talking.	QUICK CHANT

Task 2. Larry and Harry understood these examples just fine, but once again Mary found them making some errors in future weeks when she sent out the actual encoded passwords! The following table contains some of the messages Mary sent out; fill in the blank spaces.

Text message	Distractor password	Larry's password guess	Harry's password guess	Correct password
Denmark's emptiest factory is exporting some pasta Russia is cooking each Saturday.	DEFIES PRICES	?	?	?
Unions Nepal is forbidding over recent major events during breakfast are keeping exceptional records.	UNIFORMED BAKER	?	?	?

At this point, Mary decides to simply tell Larry and Harry the passwords in person.

<6>Paiwan⁶ (1/2)

21 points

Paiwan is a minority language in Taiwan/Republic of China, spoken by around 66,000 native speakers in the southern region of the island. One of the major components of Paiwan grammar is “focus”, which applies to the new piece of information that the sentence is conveying. In English, this can be represented by sentences like “It is ***the dog*** that the man likes”: in this example, ***the dog*** is focused.

Below are some sentences in Paiwan with their English translations. Sentence elements written in in ***bolded italics*** correspond to focused elements in the Paiwan sentences.

Paiwan	English
1. kanan nua uqałay tua kuka a quma nua tsakaw	The man eats the chicken in <i>the thief's field</i> .
2. qmałup tua vavuy a kuvatu	<i>My dog</i> hunts the pig.
3. djavisen nua tsemas a kukama	The spirit snatches <i>my father</i> .
4. sitarang nua uqałay a vuluq	The man protects (it) with <i>the spear</i> .
5. qałupen nua suvavuy i tua umaq a ałak nua vavaian	Your pig hunts <i>the woman's child</i> in the house.
6. kman tua kuka a tsemas	<i>The spirit</i> eats the chicken.
7. djavisen nua pulingaw tua vuluq a gadu	The shaman snatches the spear in <i>the mountain</i> .
8. langedaen nua sivitay a qaya-qayam	The soldier hears <i>the bird</i> .

Notes: (1) The digraph ***dj*** represents a single sound. (2) The word ***langedaen*** in sentence 8 is actually ***langedain***, but this was edited for the sake of simplicity.

Task 1. How would you say these sentences in Paiwan?

9. The man protects the field with <i>the dog</i> .	
10. Your shaman hunts my bird in <i>the spirit's mountain</i> .	
11. <i>The woman</i> snatches the pig.	

⁶ Created by Sam Ahmed.

<6>Paiwan (2/2)

Task 2. Now look at the following question-answer dialogues. The first answer has been translated for you.

Question	Answer
12. inu a tmarang a tsakaw?	tmarang a tsakaw i tua quma <i>The thief who protects (it) is in the field.</i>
13. anema a siqaʔup nua sukama tua watu?	siqaʔup nua kukama tua watu a kuvuluq
14. anema a sudjavisen?	kudjavisen a qaya-qayam nua vavaian
15. inu a kanan nua uqaʔay?	kanan nua uqaʔay a gadu

Based on the examples 12-15 above, write your English translation of the following responses. Mark the focused elements in your translations by putting them in brackets (parentheses).

16.	susitarang tua qaya-qayam nua pulingaw a tsemas
17.	kanen nua uqaʔay a vavuy i tua gadu
18.	kuqaʔupan tua suvatu a kuquma

Task 3. Write out the Paiwan questions and their English translations (below the Paiwan) that the sentences (16-18) could have been the answers to.

Q16.	
Q17.	
Q18.	