



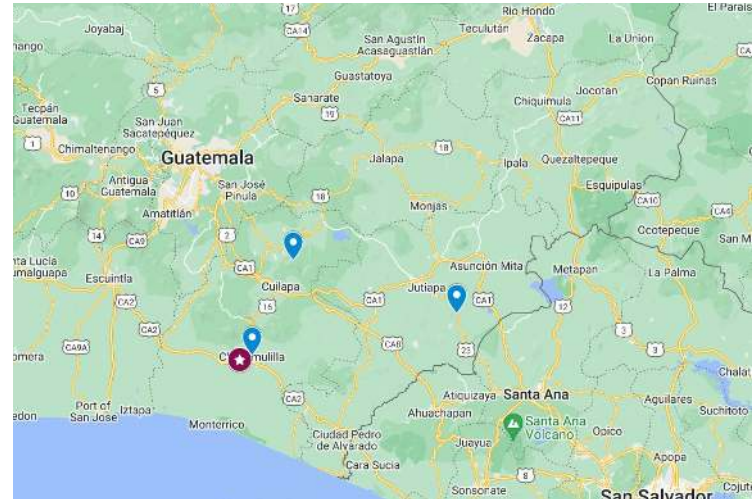
Problem 1

Guazacapán Xinka

Samuel Ahmed

The Xinkan languages

- Small family of languages:
 - Guazacapán (1 semi-speaker in 2014)
 - Jumaytepeque (2 rememberers in 2010)
 - Chiquimulilla (extinct late 1970s)
 - Yupiltepeque (extinct approx. 1908)
- Extensive fieldwork conducted in the 1970s by Terrence Kaufman and Lyle Campbell (data analysed by Christopher Rogers)





Generalisations

- (If possible) Describe each rule and when it happens **just once**.



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- e.g. **-?** = verbs without object (*intransitive + passive*)



The verb

	Verb with object (transitive)	Verb without object (intransitive/passive): add -ʔ
Complete actions	- (piri, ipla)	CVCV → C V VCV (piiri, ipla, iʃpa)
Incomplete actions	Add ' to final consonant Add a between 2 consonants (pir'i, ipal'a, iʃap'a)	



The prefixes/suffixes

	Verb with object (transitive)		Verb without object (intransitive/passive) (-?)	
	Completive	Incompletive	Completive	Incompletive
1SG	-n'	in-		
3SG	-y'	N/A	-	a-



Sound changes

What about:

- in-yu**t**am'u → inyut**u**m'u
- in-**p**ir'i-ʔ → im**b**iriʔ

Two main principles:

- Sounds next to each other become more similar. (= **assimilation**)
- Glottal sounds (ʔ, C') next to each other become less similar. (= **dissimilation**)



Becoming more similar: $n + ptkp't'k'$

- e.g. **in-pir'i** → **imbir'i**
- $n \rightarrow m$ before $p + p'$ (pronounced with the lips)
- $n \rightarrow \eta$ before $k + k'$ (pronounced with back of the tongue)
- $p \rightarrow b$ after n (pronounced with vibration/voicing)
 $t \rightarrow d$
 $k \rightarrow g$



Becoming more similar: vowels

- The inserted vowel **a** becomes another vowel if surrounded by that vowel:
 - in-yu**a**m'u → inyutum'u
 - in-ti**a**n'i → intikin'i



Becoming less similar: glottals

- Glottal sounds are those pronounced by briefly blocking the air in the throat/larynx.
- i.e. **ʔ** and **consonants followed by ʔ**
- These sounds do not like being pronounced next to each other.

- (also **ʂʔ** → **tsʔ**)



Becoming less similar: glottals

- ...**C'**V-**y'** → ...**C'**V-**y** (e.g. **hik'a-y'** → **hik'a-y**)
- ...**C'**V-**n'** → ...**C'**V-**ŋ** (e.g. **hik'a-n'** → **hik'a-ŋ**)
- ...**C'**V-**ʔ** → ...**CV**-**ʔ** (e.g. **a-hik'a-ʔ** → **a-hika-ʔ**)
(e.g. **in-işap'a-ʔ** → **in-işapa-ʔ**)



Task (a)

	Form 1	Form 2	Translation
15.	netkay'	innetak'a	<i>push</i>
16.	kiriy'	ingir'i	<i>pull</i>
17.	p'uhruy'	imp'uhur'u	<i>make holes</i>
18.	her'oy	inher'o	<i>smooth out</i>

in-netak'a

iŋ-gir'i

im-p'uhur'u

in-her'o

Task (b)

39.	her'oŋ	<i>I smoothed (it) out</i>
40.	iniŋpa?	<i>I left</i>
41.	apla?	<i>it was opened</i>
42.	ŋur'uy	<i>it chose (it)</i>
43.	pirin'	<i>I saw (it)</i>
44.	iŋsawats'a	<i>I plant (it)</i>
45.	k'aani?	<i>it was trapped</i>
46.	imp'ihana?	<i>I leap</i>
47.	ahika?	<i>it is being sewn, woven</i>
48.	inipla?	<i>I was bathed</i>

ŋur'u-y
piri-n'
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im-p'ihana-?
a-hika-?
in-ipla-?

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k'aani-?
im-p'ihana-?
a-hika-?
in-ipla-?

Who graded?

- Sam Ahmed (me!)
- Dmitry Gerasimov
- Dan-Mircea Mirea
- Alexander Piperski



- (with much help from Jan Petr and Liam McKnight)



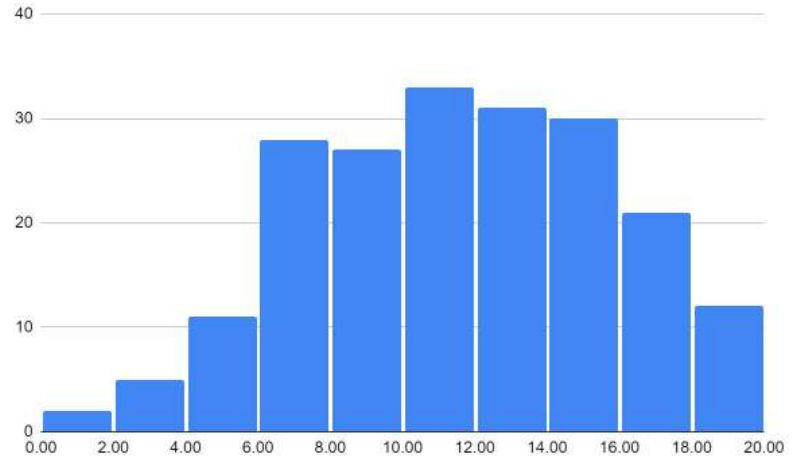
Questionnaire

- You voted this the easiest problem...



Questionnaire

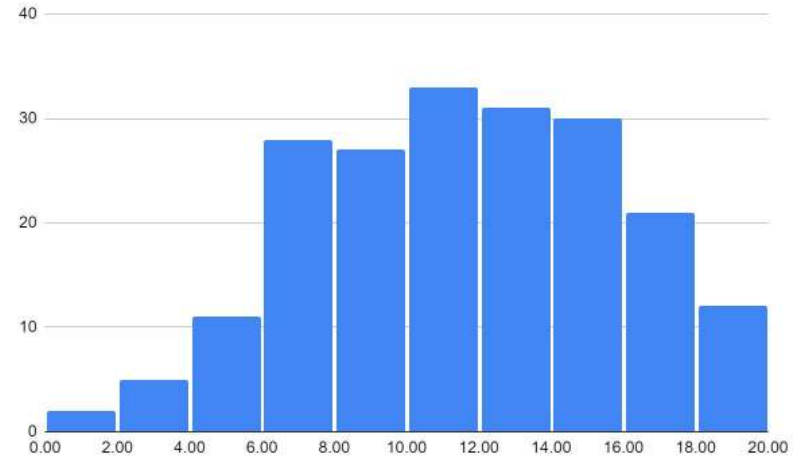
- You voted this the easiest problem...
- ...and you were right!
- Average score: 11.3 / 20





Questionnaire

- You voted this the easiest problem...
- ...and you were right!
- Average score: 11.3 / 20
- Three 20/20s...

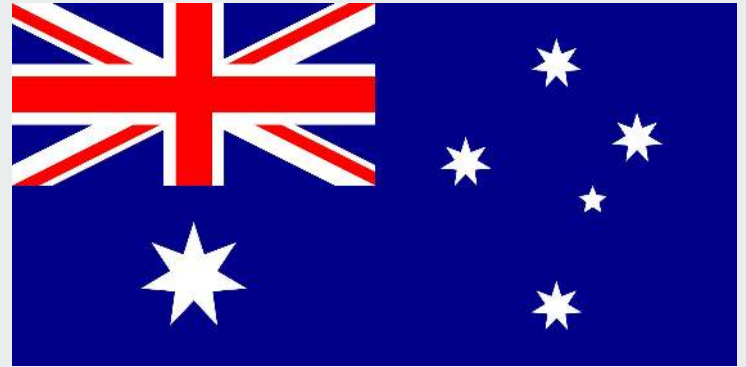




Best solutions

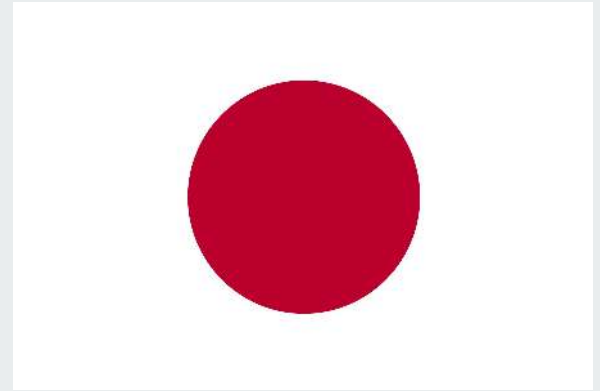
Yijie Wang

Australia Scotch



Ryusei Omiya

Japan Samurai



Brest Lenarčič

Slovenia

