

Problem #4

Agbirigba

Liam McKnight

Graded by

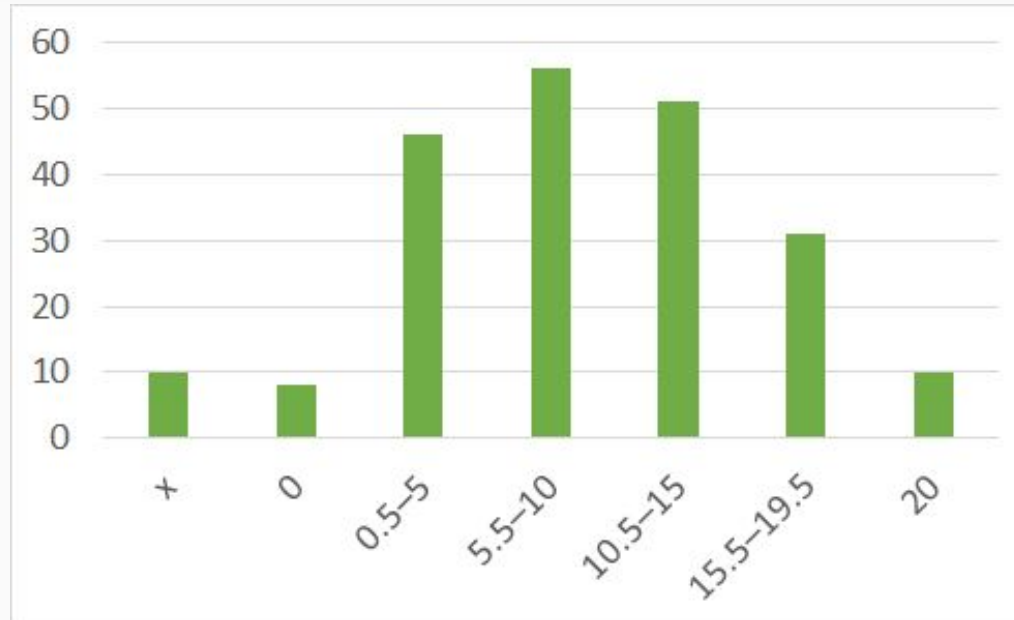
- Alexander Piperski
- Pan Tung-Le
- Dmitry Gerasimov
- Myself

(With thanks to all those who helped translate solutions)

Stats stats stats

- 2nd easiest problem by average score
- Average score: 9.18/20
- 10 people scored full marks!

Stats stats stats



Secret languages

- Transformations of ordinary language
- Usually involves adding or moving around sounds or syllables
- Found all over the world, for many different uses

Pig Latin (a form of English, not Latin)



Qu language

~~Agbirigba~~ Logic of Agbirigba is same as "Qu language" [~~in~~ in this language you should add "qu" for each hece {I forgot its english form, so I wrote in turkish " } // P.S → hece - is small part of a word.

In Agbirigba, ti/ti/tu/tv (and ~~their~~ their other variants) using in order to "hide" the word. ~~It dep~~ ~~You should use one of the~~

Ogbakiri & Agbirigba

Atlantic-Congo



Igboid



Ikwerre



Ogbakiri



Ogbakiri & Agbirigba

Atlantic-Congo



Igboid



Ikwerre



Ogbakiri



Ogbakiri & Agbirigba

- Agbirigba was “born from the need to communicate secretly by a (recently) persecuted section of the Ogbakiri community” (Akinlabi & Ndimele, 2013)
- Unintelligible to most other Ogbakiri speakers
- In 2010, only around 30 people reported being able to speak and understand Agbirigba

The solution

Appears to be fairly straightforward
- add *t* + vowel before every syllable,
that's it.

Ogbakiri	Agbirigba
ńdá	ńtódá
bísí	túbítísí
àyò	àtìyò
ńbórô	ńtóbótórò
óǵí	ótíǵí
òtú	òtútú
míní	tímítíní
wèrù	tùwètùrù
èbó	ètóbó
àwâ	àtówà

Ogbakiri	Agbirigba
rímě	tírítúmě
mónô	tómótônô
íbèrè	ítùbètìrè
áyâ	átíyâ
ónǫ	ótǫnǫ
móyô	tómótíyô
ngàdǎ	ntògàtódǎ
ómìrìmǎ	ótòmìtìrìtòmǎ
àgìrìgò	àtìgìtìrìtògò
wěné	túwétíné

The solution

“Which problem did you find the easiest?”

Quel problème vous a paru le plus facile ?

4 mais parfois les apparences sont trompeuses...

“4, but sometimes appearances can be deceptive...”

The solution

- Insert **tV** before every syllable with the form **CV**
- Insert it *after* the first sound of words starting with:
 - a vowel

òtǔ | òtǔtǔ

- a syllabic nasal (**m**, **n**, **ɲ**, **ɳ**, carrying tone)
- The nasal consonant assimilates to **t** (becomes **n**)

ńbórô | ńtúbótúrò

The solution

V is the same as the following vowel in terms of:

- Nasality

rímě		tírítǔmě
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- Tone (high/low)

- Falling tone 'splits' into high followed by low

áyâ		átĩyâ
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The solution

V is the same as the following vowel in terms of:

- Tongue root position

ε, ι, ɔ and ʊ are pronounced as e, i, o and u respectively,
but with the root of the tongue further back in the mouth.

e i o u [+ATR]

ε ι ɔ ʊ a [-ATR]

wě̀rũ

tũwě̀tũrũ

èb́ó

èt́ób́ó

ńd́á

ńt́ód́á

(No word in O. or A. may contain vowels with different [ATR])

The solution

- **V** is selected from **i/ɪ/u/ʊ**
- May be determined by following consonant:
 - Before a labial consonant (**b/m/w**): select **u/ʊ**

bí sí	túbí tí sí	rím ě	tírítúm ě	w ě ě	túw ě tĩ ě
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- Before **y**: select **i/ɪ**

áy â	átĩ y â
------	---------

The solution

- **Otherwise**, **V** is determined by the following vowel:
- Before rounded (**o/ɔ/u/ʊ**) or back vowels (**a**): select **u/ʊ**

òtǔ

| òtǔtǔ

ńdá

| ńtǔdá

- Before front vowels (**e/ɛ/i/ɪ**): select **i/ɪ**

ótǐ

| ótítǐ

Assignments

(a) Exception: **míně ~ tīmītěně**

-- should be **tūmītěně**, because **m** is a labial consonant

Assignments

(b)

1. rúṭũ → túrú tútù

5. bék^{wũ} → túbé tũk^{wũ}

2. rèwũ → tìrè tũwũ

6. ríyòrò → tírí tĩyò tũrò

3. bíkó → túbí túkó

7. h^{wò}gâ → tũh^{wò}túgà

4. ñyě riyǎ → ñtĩyě tìrì tĩyǎ

Honourable mentions

Honourable mentions

The following contestants scored 20/20:

Xie Lingrui

Hong Kong EAT

Ritam Nag

India Saffron

Daria Kryvosheieva

Ukraine i

Roman Shabanov

Netherlands Patat

Honourable mentions

The following contestants scored 20/20:

Merlin Fischer	Germany Streichholzschächtelchen
Mihai-Alexandru Bratu	Romania
Olga Zinovyeva	Russia Strelka

Best solutions

Best Solution - Problem #4

[tɪlɪɐtɪnɪt tʊzajtɪtsɪf]

Russia
Belka



Best Solution - Problem #4

Leonid Zaitsev

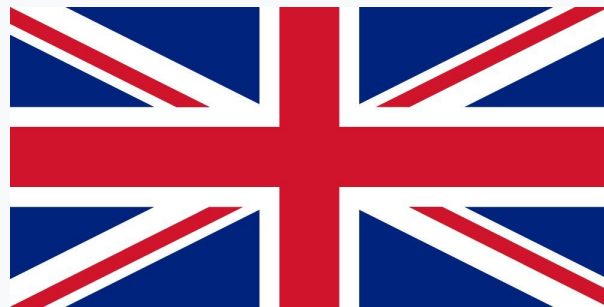
Russia
Belka



Best Solution - Problem #4

[atılıktırsantudə tıɹɔbtusən]

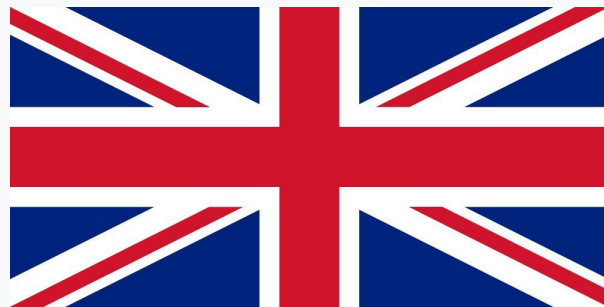
UK U



Best Solution - Problem #4

Alexander Robson

UK U



Best Solution - Problem #4

[ərtɪtɛm tɪhrɛʃtʊkə]

Ukraine i



Best Solution - Problem #4

Artem Hrechka

Ukraine i



Acknowledgements

- Ikwerre consultant: Maureen Abel
- My fellow markers
- The IOL Problem Committee
- Everyone who submitted solutions (even though it gave us a lot of work)
 - The 10 people who didn't submit solutions (you gave us slightly less work to do)

Sources

Akinbiyi Akinlabi and Ozo-Mekuri Ndimele (2013). *Agbirigba: The birth of an Igboid language*.

G. N. Clements and Sylvester Osu (2003). *Ikwere Nasal Harmony in Typological Perspective*.

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