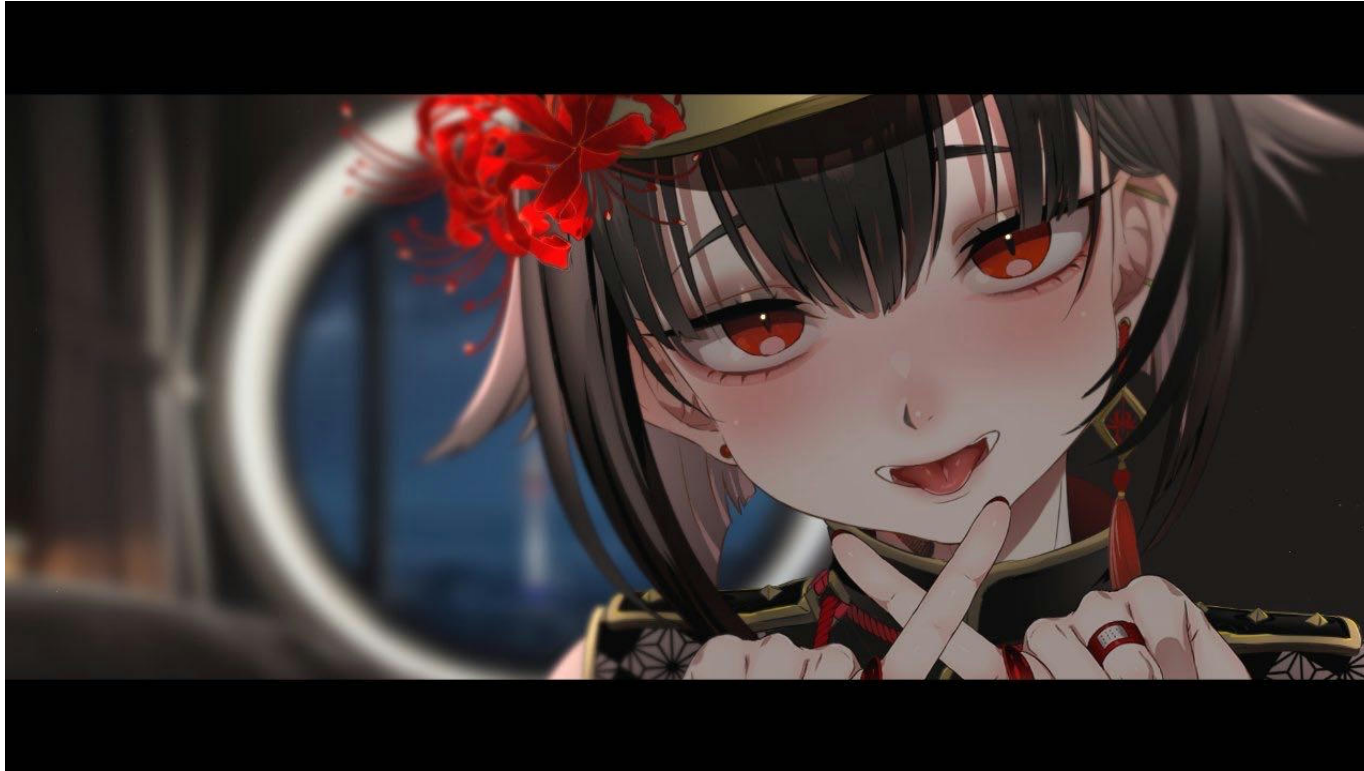# Individual problems in IOL 2023: An individual analysis of mine

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Problem 1

1. piriy' /piri-y'/ :: ɨmbir'i /ɨn-piri-'/ — see
2. im'ay /im'a-y'/ :: ɨnim'a /ɨn-im'a-'/ — say, tell
3. aplay' /apla-y'/ :: ɨnapal'a /ɨn-apla-'/ — open (it)
4. k'aniy' /k'ani-y'/ :: ɨŋk'an'i /ɨn-k'ani-'/ — trap
5. łikniy' /łikni-y'/ :: ɨnłikɨn'i /ɨn-łikni-'/ — obey, believe
6. tundiy' /tunti-y'/ :: ɨndunat'i /ɨn-tunti-'/ (!) — play (an instrument)
7. ṣakṣay' /ṣakṣa-y'/ :: ɨnṣakats'a /ɨn-ṣakṣa-'/ — steal
8. kiṣiy' /kiṣi-y'/ :: ɨŋgits'i /ɨn-kiṣi-'/ — roast
9. hɨk'ay /hɨk'a-y'/ :: ɨnhɨk'a /ɨn-hɨk'a-'/ — sew, weave
10. hɨnɨy' /hɨnɨ-y'/ :: ɨnhɨn'ɨ /ɨn-hɨnɨ-'/ — learn, know
11. yułmuy' /yułmu-y'/ :: ɨnyułum'u /ɨn-yułmu-'/ — suck candy
12. iplay' /ipla-y'/ :: ɨnipal'a /ɨn-ipla-'/ — bathe (it)
13. p'ahniy' /p'ahni-y'/ :: ɨmp'ahan'i /ɨn-p'ahni-'/ (!) — dig
14. ter'oy /ter'o-y'/ :: ɨnder'o /ɨn-dero-'/ — kill

15.
16.
17.
18.
19. ɨmbiiriʔ /ɨn-<V>-piri-ʔ/ — I was seen
20. hɨkʼaŋ /hɨkʼa-ŋ/ — I sewed, wove (it)
21. iŋkʼataʔ /ɨn-kʼata-ʔ/ — I lie down
22. kɨrɨnʼ /kɨrɨ-nʼ/ — I pulled (it)
23. ɨnsiiruʔ /ɨn-<V>-siru-ʔ/ — I hurried
24. ɨniṣapaʔ /ɨn-iṣpa-ʔ/ — I leave (!)
25. ɨnimaʔ /ɨn-imʼa-ʔ/ — I am being told / (it) is being said to me
26. ṣawṣanʼ /ṣawṣa-nʼ/ — I planted (it)
27. ṣurʼuŋ /ṣurʼu-ŋ/ — I chose (it)
28. ɨndeeroʔ /ɨn-<V>-terʼo-ʔ/ — I was killed; I died
29. ɨmbiriʔ /ɨn-piri-ʔ/ — I am being seen

30. heeroʔ /<V>-hero-ʔ/ — it was smoothed out (!)
31. p'ɨhnaʔ /p'ɨhna-ʔ/ — it leaped
32. ṣawṣaʔ /ṣawṣa-ʔ/ — it was planted (!)
33. ak'okamaʔ /a-k'okama-ʔ/ — it kneels
34. ateroʔ /a-ter'o-ʔ/ — it is being killed; it dies
35. k'aataʔ /<V>-k'ata-ʔ/ — it lay down
36. asiruʔ /a-siru-ʔ/ — it hurries
37. iṣpaʔ /<V>-iṣpa-ʔ/ — it left (!)
38. aṣakaṣaʔ /a-ṣakṣa-ʔ/ — it is being stolen (!)
- /ɨn- <V> -ʔ/ 1sg past passive or 1sg past intransitive
- /-ŋ/ 1sg past transitive
- /ɨn- -ʔ/ 1sg present passive or 1sg present intransitive
- /-n'/ 1sg present transitive
- /<V> -ʔ/ 3sg past passive or 3sg past intransitive
- /a- -ʔ/ 3sg present intransitive or 3sg present passive

Problem 2

1. nuta **syka-ru** ny-kanawa-te uwa-mukary — I gave my canoe to her.
2. ny-kanawa-te **ny-syka-ru** uwa-mukary — I gave my canoe to her.
3. pita **ãta-ry** ĩpurãã — You (sg) drank the water.
4. kyky **myna-ru** ny-herẽka sytu-mukary — The man brought my blood to the woman.
5. herẽka-txi **u-ãta-ry** sytu — The woman drank the blood.
6. nhi-ximaky-te **pi-xinhika-ry** — You (sg) remembered my fish (sg).
7. pi-txipary-te **u-myna-ry** kyky-mukary — She brought your (sg) banana to the man.
8. hãtakuru **xinhika-ry** n-aiku-te — The girl remembered my house.
9. sytu apy **y-syka-nu** nuta-mukary kyky — The man gave the woman's bone to me.
10. nh-ĩpurãã-te **n-ãta-ry** — I drank my water.
11. kywĩ-txi **a-puka-ry** — He found the head.
12. ywa **myna-nu** kyky uky nuta-mukary — He brought the man's eye to me.
13. ximaky **nhika-ry** apĩ-txi — The fish (sg) ate the bone.
14. hãtakuru txipary-te **na-puka-ry** — I found the girl's banana.

15. ximaky kywy **i-nhika-ry** — He ate the fish's (sg) head.
16. hãtakuru **u-apuka-ru** — She found the girl.

- Word order: S V O P, O V P S, P-or P-ed
- ĩ → y / _#
- Nominal morphology:
  - /-mukary/ allative
  - /n(y)- -te/ my (canoe, house), /nh(i)- -te/ my (fish, water)
  - /pi- -te/ your (sg) (banana)
  - /-te/ NP's (girl's banana), /-Ø/ NP's (woman's bone, man's eye, fish's head)
  - otherwise /-txi/ (head, bone, blood), /-Ø/ (water, girl)
- Verbal morphology:
  - Subject (no preverbal subject NP): /n(a)-/ 1sg, /A-/ 3sg, /u-/ 3sg female, /pi-/ 2sg
  - (Indirect) object: /-ru/ 3sg female, /-ry/ 3sg non-female, /-nu/ 1sg

Problem 3

1. o+b-dahetok — You (sg) really returned.
2. nak+e-dahetok — We returned.
3. nam+bat-ihwin — Aw, I cried.
4. nam+b+e-otab — We really chased you (pl) away.
5. um-kul<aɣ>awn — He laughed at you (sg) in vain.
6. e-keseh — You (pl) spat on him.
7. u+bat+e-huɣ<an>ab — Aw, you (sg) silenced us.
8. nak+um-hoɣab — I silenced you (pl) in vain.
9. nam+bam+e-ɣad<aɣ>awn — Oh, we left you (sg) behind!
10. e+b+e-ɣad<an>awn — You (pl) really left us behind.
11. i+bat+um-ɣad<e>wn — Aw, you (pl) left him behind in vain.
12. a-is<an>ab — He cut me in half.
13. o+bam-es<e>b — Oh, you (sg) cut him in half!

- Constituent 1
  - Subject:
    - [nam-, nak-] 1
    - [o-, u-] 2sg
    - [e-, i-, Ø-] 2pl
    - [a-, Ø-] 3sg
    - Note on procedure: introduce phonology to grammatical variants.
  - /^bat/ aw, /bam/ oh, /b/ really
  - /-um/ in vain
  - /-e/ plural subject that is not 'aw' or 'aw' plural object;
- Constituent 2
  - Object infixes: /^aɣ/ 2sg, /^an/ 1, /E/ 3sg, /Ø/ 2pl.

Problem 4

1. ni **mawinēskom** *ik* — he challenges me
2. ki **wāpam** *in* āw āw — you (pl) see me
3. ki **nakin** *in* ān — you (sg) stop us, you (pl) stop us
4. ni **kakwēcim** *ān* ān ak — we ask them
5. ki **wīcih** *āw* — you (sg) help him
6. ni **kakwēcim** *ān* ān — we ask him
7. ni **wāpam** *āw* — I see him
8. ki **mawinēskom** *in* — you (sg) challenge me
9. ni **mawinēskom** *ik* on ān ak — they challenge us
10. ki **kakwēcim** *ik* — he asks you (sg)
11. ki **wāpam** *itin* ān — we see you (sg), we see you (pl)
12. ni **nakin** *āw* ak — I stop them
13. ki **wīcih** *ik* ow āw — he helps you (pl)
14. ki **nakin** *ik* w ak — they stop you (sg)

15. ki **wāpam** *āw* āw ak — you (pl) see them
16. ki **wīcih** *itin* — I help you (sg)
17. ē- **nakin** āyēk — as you (pl) stop him
18. ē- **wīcih** ak — as I help him
19. **mawinēskom** *ik* oyāhkwāwi — if they challenge us
20. **wāpam** aci — if you (sg) see him
21. **wīcih** itako — if I help you (pl)
22. ē- **wāpam** ikoyēk
23. ni **nakin** ikonān
24. ki **kakwēcim** āwāw
25. ki **wīcih** itināwāw

- Prefixes: /ki-/ ∃ 2, /ni-/ ¬∃ 2.
- Suffixes, SLOT I:
  - /-ik/ 3 → 1 OR 3 → 2.
    - he → me, they → us, he → you (sg), he → you (pl), they → you (sg).

- /-in/ 2 → 1.
  - you (pl) → me, you (sg) → us, you (pl) → us, you (sg) → me.
- /-itin/ 1 → 2
  - we → you (sg), we → you (pl), I → you (sg)
- /-ān/ 1pl → 3.
  - we → them, we → him.
- /-āw/ 1sg → 3 OR 2 → 3
  - I → him, I → them, you (sg) → him, you (pl) → them.
- Suffixes, SLOT II:
  - /-on/ they → us
  - /-ow/ he → you (pl)
  - /-w/ they → you (sg)
- Suffixes, SLOT III:
  - /-āw/ 2 subj > 2pl subj
  - /-ān/ 1 > 1pl

- Suffixes, SLOT IV
  - /-Ø/ 2 > 2sg/2pl / 1pl
  - /-āw/ 2 > 2pl / 1sg, 2sg, 3
  - /-ak/ 3 > 3pl
- Unless specified, X > 3sg.
- Avoidance of /-āw, -āw-āw, -āw-āw-āw/ by syncretism.

Problem 5

- baashuunni
  - $7 = (5 + 2)$
- [beɲjaaga] na [niŋkin]
  - $21 = (20) + (1)$
- [ŋkwuu taanre] na [beeshuunni] na [kaŋkuro]
  - $285 = (80 \times 3) + (20 \times 2) + (5)$
- [kampwoo] na [ŋkwuu shuunni] na [beetaanre] na [baani]
  - $626 = (400) + (80 \times 2) + (20 \times 3) + (5 + 1)$
- [kampwɔhii sicyɛɛre] na [beɲjaaga] na [kɛ] na [baaricyɛɛre]
  - $1639 = (400 \times 4) + (20) + (10) + (5 + 4)$
- [kampwɔhii shuunni] na [kɛ]
- [ŋkuu] na [baataanre]