

Online Olympiad in Linguistics 2023 — Student Edition

Solutions & Grading Scheme

1. Avanic

Word order: Verb – Subject – Object.

Word order in a focused sentence (“It is X that ...”): **ko** – focused Subject – Verb – Object.

Relative clause is placed after the noun it describes: Noun – **a** – Relative clause

Negation is expressed with **ni** before the verb.

Consonant alternations:

| | | | | |
|----------------|----------|----------|-----------|----------|
| C ₁ | p | t | ts | k |
| C ₂ | f | θ | s | x |

Unfocused nouns begin with C₁, focused – with C₂.

Verb structure:

| Tense | Stem | Negation |
|------------------|---|----------------|
| é- present tense | (C)aC ₁ in the present tense | -ó affirmative |
| ∅ past tense | (C)oC ₂ in the past tense | -âi negative |

When multiple non-low tones occur in a word, only the first one remains. All other syllables become low.

éa > ê

(a):

| | | |
|----|---|---|
| 10 | ékaso tsón sâi | John is cutting the crab. |
| 11 | ko xâta énaθo tsî | It is Carter that is fishing the fish. |
| 12 | ko fîli étsafo namkú | It is Billy that is pushing the tree. |
| 13 | yotó kâta afó a éxaθo pápe | Carter cooked the bean that the father is buying. |
| 14 | ni opâi sâi a ni notâi tsón kepêfo a xotó píli | The crab that John did not fish did not crush the pebble that Billy bought. |

(b):

| | | |
|----|---|--|
| 15 | It is the father that did not eat the dog. | ko fápe ni otâi nuká |
| 16 | Billy is not jumping onto the house. | ni êxai píli tiétsu |
| 17 | The dog is cooking the bean that Tina cut. | éyaθo nuká afó a kotsó tína |
| 18 | It is the fish that did not crush the tree that the crab is pinching. | ko sî ni opâi namkú a ésaθo sâi |

Grading

- Task (a): 1 point is awarded for each correct clause: sentences 10, 11 and 12 are worth 1 point each, sentence 13 is worth 2 points, sentence 14 is worth 3 points; 0.5 points are awarded for a correct clause with wrong verb tense or wrong negation.
- Task (b): 3 points are awarded for each correct sentence; 2 points are awarded for each sentence with 1 mistake; 1 point is awarded for each sentence with 2 mistakes.
- Multiple mistakes in one word are counted as one mistake.
- Each misplaced, superfluous or missing word is counted as 1 mistake.
- Notice on the grading of Japanese submissions: the Japanese problem set contained two typos that may have led to some wrong answers in the submissions. For the contestants with Japanese working language mixing up “fish” and “crab” in the answers and providing an affirmative verb in sentence 16 were not considered as mistakes.

2. Yele

(a):

| | | | |
|----|------------------------|---|--|
| 1 | kānə | D | door |
| 2 | kānə pə | K | ladder (lit. door–long.thing, a long thing that leads to a door) |
| 3 | kīī | A | banana tree |
| 4 | kīī kigha ntūū | M | ripe banana (lit. banana.tree–ripe–fruit) |
| 5 | kīī ntūū | Q | unripe banana (lit. banana.tree–fruit) |
| 6 | keme kigha ntūū | N | ripe mango (lit. mango.tree–ripe–fruit) |
| 7 | mbwaa dumu | I | full water bottle (lit. water–roll) |
| 8 | mbwaa limi | H | five rivers (lit. water–five) |
| 9 | nee | B | canoe |
| 10 | nee limi | G | five canoes |
| 11 | nee pə | J | hull (lit. canoe–long.thing) |
| 12 | ngwolo | E | eye |
| 13 | ngwolo ntūū | F | eyeball (lit. eye–fruit) |
| 14 | pə | L | long object |
| 15 | təpwa | P | tobacco |
| 16 | təpwa dumu | C | cigarette (lit. tobacco–roll) |
| 17 | tpile pə | O | snake (lit. thing–long.thing) |

(b):

| | |
|-------------|-----------------|
| keme | mango tree |
| dumu | cylinder / roll |

(c):

| | |
|-------------|------------------|
| ripe | kigha |
| five fruits | ntūū limi |

Grading

- Task (a): Maximum score for the task is 14 points. 1 point is deducted for each incorrect or missing answer. The minimum score is 0.
- Task (b), **keme**: 2 points are awarded for *mango tree*; 1 point is awarded for *mango*.
- Task (b), **dumu**: 2 points are awarded for *roll, cylinder, container* or any other answer that connects both *water* with *full water bottle* and *tobacco* with *cigarette* and doesn't violate the constituent order presented in the problem data.
- Task (c), *ripe*: 1 point is awarded for **kigha**; 0,5 points are awarded for any two- or three-word phrase containing **kigha**.
- Task (c), *five fruits*: 1 point is awarded for **ntũũ limi**; 0,5 points are awarded for **limi ntũũ**.

3. Wyandot

This problem features two types of sentences:

1. A pronoun acts as a subject of a transitive verb:

| Negation | Tense / mood | Subject | Object | Verb |
|--|--|---------|------------------------------|---|
| te' - negative ∅ affirmative | aa possibility (<i>might</i>) e future tense (<i>will</i>) a' past tense ∅ present tense | | noun root ∅ for <i>it</i> | [Y] a' "to break" [Y] era't "to use" |

Subject:

| | singular | dual | plural |
|------------------------|-----------|------------|-------------|
| 2 nd person | sh | tsi | skwa |
| 3 rd person | ha | hi | hati |

2. A noun acts as the sole argument of the verb "to break":
ya-(noun root)-**ah** (Negation)-(Tense/Mood)-**yaak**-[Y]**a'**

The element [Y] changes its form depending on the preceding sound:

- **y** after a consonant;
- **zh** after **i**;
- ∅ after **a**.

Noun roots:

| | |
|--------------|--------|
| ra | bag |
| da'ts | kettle |
| 'd | arrow |

Although this cannot be inferred from the given data, **-yaak-** is actually two morphemes: **-ya-** indicates a third-person singular feminine or inanimate subject, and **-ak-** indicates the semireflexive. The latter is used when the subject both performs and receives an action.

For the purpose of input convenience, the original orthography was modified in the problem. Specifically, **a:** was replaced with **aa**, **ʔ** became **'**, **š** became **sh**, and **ž** became **zh**.

(a):

| | |
|----------------------------|------------------------|
| You (sg) will break it. | eshya' |
| You (du) might not use it. | te'aatsizhera't |
| You (pl) do not break it. | te'skwaa' |

(b):

| | |
|-------------------------|------------------------------|
| He might use a bucket. | aaha'dahkwyera't |
| They (du) use land. | hihuhtaera't |
| They (pl) broke a cane. | a'hati'tizha' |
| A spear might break. | yaate'darah aayaakya' |

Grading

- Task (a): 2,5 points are awarded for the correct answer.
- Task (b): 3 points are awarded for the correct answer in the first three sentences and 3,5 points are awarded for the correct answer in the last sentence.
- 0,5 points are deducted for each wrong, misplaced, superfluous or missing character.
- The minimum score for each sentence is 0.

4. Tlapanec

| | X_A | X_B |
|---|-------------------|----------------|
| 1 | | emba-mo |
| 2 | ajma | ijma-mo |
| 3 | ajsu | isu-mu |
| 4 | ajku | ijku-mu |
| 5 | wisu | |
| 6 | majju | |
| 7 | juan | |
| 8 | mingiyun | |
| 9 | mijna-guwa | |

| | | |
|--------|--------------------------------|-----------|
| 10 + X | guwa-X_B | 1 ≤ X ≤ 4 |
| 15 + X | guwa-nisu X_B | 1 ≤ X ≤ 4 |
| 50 + X | ajku-rumi X_B | 1 ≤ X ≤ 9 |

| 20X | +Y |
|---|---|
| X = 1 → mba-skiyun X > 1 → mba-X*_A-skiyun | Y < 10 → Y _B Y=10 + α → guwa-α_B (1 ≤ α ≤ 4) Y=10 + β → guwa β_B (5 ≤ β ≤ 9) |

X*_A: if X_A starts with a vowel, it is deleted.

(a):

| | |
|---|--------------|
| 1 | 13 × 4 = 52 |
| 2 | 9 × 2 = 18 |
| 3 | 21 + 17 = 38 |
| 4 | 3! = 6 |
| 5 | 29 × 3 = 87 |

| | |
|----|--------------|
| 6 | 12 × 3 = 36 |
| 7 | 4 × 4 = 16 |
| 8 | 33 + 11 = 44 |
| 9 | 25 + 10 = 35 |
| 10 | 30 × 2 = 60 |

(b):

| | |
|---|------------------------|
| A | guwa-emba-mo |
| B | guwa |
| C | mba-skiyun guwa |

(c):

| | |
|----|----------------------------------|
| 19 | guwa-nisu ijku-mu |
| 53 | ajku-rumi isu-mu |
| 69 | mba-jsu-skiyun mijna-guwa |
| 77 | mba-jsu-skiyun guwa jua |
| 88 | mba-jku-skiyun mingiyun |

Grading

- Task (a): 0.5 points are awarded for each correct answer; 0.25 points are awarded for each answer that contains 1 mistake. No points are deducted for any change in the order of writing the equality. However, the terms and operations on each side of the equation should be identical to those in the problem.
- Task (b), A and C: 1.5 point each are awarded for correct answers; 0.5 point each are awarded for an answer containing 1 mistake.
- Task (b), B: 1 point is awarded for the correct answer.
- Task (c): 19, 53 and 88 are worth 2 points each, 77 and 69 are worth 2.5 points each; 1 point is subtracted for each mistake; the minimum score for each numeral is 0.
- An error is a wrong, misplaced, missing or superfluous morpheme.