Example 1 - just dictionary

Here are few sentences with their English translations. Translate given examples and write the rules that you observed from the given sentences.

1. Makeri kawo yaro. The smith brought the boy.
2. Yaro kawo makeri. The boy brought the smith.
3. Mace hura wuta. The woman started the fire.
5. Makeri kawo yarinye. The smith brought the girl.

Translate into English:
1. Mace kawo yaro. The woman brought the boy.
2. Makeri dawo wuta. The smith returned the fire.

Translate from English:
1. The boy started the fire. Yaro hura wuta
2. The smith returned. Makeri dawo

Rules observed:

Word order: SVO
Nouns not affected by position in the sentence, this is just vocabulary/dictionary

Words for boy (Yaro)and girl (Yarinye)may be related, but there’s not enough data really to say this
Example 2 - word order

Here are few phrases with their English translations. Translate given examples and write the rules that you observed from the given phrases.

1. nimi a gbomu  snake’s mouse
2. lende a kai  man’s ship
3. kafa a kai  man’s shoulder
4. lende a nimi  mouse’s ship
5. ja a nimi  mouse’s eye
6. keni a gbomu  snake’s tongue

Translate into English:
1. ja kai  man’s eye
2. lende a gbomu  snake’s ship

Translate from English:
1. man’s snake  gbomu a kai
2. snake’s eye  ja a gbomu

Rules observed:

“’s” = “a”
Genitive / ownership = “a”
Word order: thing possessed - owner – eg 1: mouse of the snake?
Example 3 - 1 rule

Here are few phrases with their English translations. Translate given examples and write the rules that you observed from the given phrases.

1. nimi a gbomu  snake’s mouse
2. lende a kai  man’s ship
3. kafa kai  man’s shoulder
4. lende a nimi  mouse’s ship
5. ja nimi  mouse’s eye
6. keni gbomu  snake’s tongue

Translate into English:
3. ja kai  man’s eye
4. lende a gbomu  snake’s ship

Translate from English:
3. man’s snake  gbomu a kai
4. snake’s eye  ja gbomu [no ‘a’]

Rules observed:

“s” = “a” in certain cases
Genitive / ownership = “a” when the noun is a body part, sometimes called inalienable possession
Word order: thing possessed – owner, cf English X of the Y = Y’s X
Example 4 - categories

Here are few phrases with their English translations. Translate given examples and write the rules that you observed from the given phrases.

1. bangul yara  man
2. bangun yabu  mother
3. bangun waymin mother in law
4. bangu yila    feather
5. bangun malayigara scorpion
6. bangu gurugu  drink
7. bangun bima   snake
8. bangul gubimbulu waiter
9. bangu garan   smoke
10. bangun dunan poison ivy
11. bangu juga   sugar
12. bangu diban  stone
13. bangul binjirin chameleon
14. bangul gula  koala
15. bangul bargan kangaroo

Fill in the blanks:
1. bangun___mugunanja aunt
2. bangu___munga sound
3. bangul___bayimbam butterfly
4. bangun___amo weapon
5. bangul___nalnga boy

Rough work table to see things clearly:

<table>
<thead>
<tr>
<th>Root: bang</th>
<th>bang-ul yara</th>
<th>man</th>
</tr>
</thead>
<tbody>
<tr>
<td>bang-un gubumbulu</td>
<td>waiter</td>
<td></td>
</tr>
<tr>
<td>bang-un binjirin</td>
<td>chameleon</td>
<td></td>
</tr>
<tr>
<td>bang-un gula</td>
<td>koala</td>
<td></td>
</tr>
<tr>
<td>bang-un bargan</td>
<td>kangaroo</td>
<td></td>
</tr>
<tr>
<td>bang-un yabu</td>
<td>mother</td>
<td></td>
</tr>
<tr>
<td>bang-un waymin</td>
<td>mother in law</td>
<td></td>
</tr>
<tr>
<td>bang-un malayigara</td>
<td>scorpion</td>
<td></td>
</tr>
<tr>
<td>bang-un bima</td>
<td>snake</td>
<td></td>
</tr>
<tr>
<td>bang-un dunan</td>
<td>poison ivy</td>
<td></td>
</tr>
<tr>
<td>bang-u yila</td>
<td>feather</td>
<td></td>
</tr>
<tr>
<td>bang-u gurugu</td>
<td>drink</td>
<td></td>
</tr>
<tr>
<td>bang-u garan</td>
<td>smoke</td>
<td></td>
</tr>
<tr>
<td>bang-u juga</td>
<td>sugar</td>
<td></td>
</tr>
<tr>
<td>bang-u diban</td>
<td>stone</td>
<td></td>
</tr>
</tbody>
</table>

Rules:

Root word: bang (indefinite article or “a”)

Endings:

ul ending – male, harmless
un - female.dangerous (!)
u – inanimate
Example 5 - endings for sg/pl

Here are few phrases with their English translations. Translate given examples and write the rules that you observed from the given phrases.

1. ho tu cyriu onos  owner’s donkey
2. hoi tu emporu adelphoi  trader’s brothers
3. hoi ton onon emporoi  donkeys’ traders
4. hoi ton cyrion hyioi  owners’ sons
5. ho ton hyion dulos  sons’ slave
6. hoi ton dulon cyrioi  slaves’ owners
7. ho ton adelphon oicos  brothers’ house
8. ho tu oicu cyrios  house’s owner

Translate from English:
1. traders’ houses  hoi ton emporon oicoi
2. slave’s donkeys  hoi tu dulu onoi

Translate into English:
1. ho tu onu emporos  donkey’s trader
2. ho ton dulon dulos  slaves’ slave

Rough work table to see things clearly:

<table>
<thead>
<tr>
<th>cyri-u</th>
<th>empor-u</th>
<th>oic-u</th>
</tr>
</thead>
<tbody>
<tr>
<td>cyri-on</td>
<td>adelph-on</td>
<td>hyi-on</td>
</tr>
<tr>
<td>cyri-oi</td>
<td>empor-oi</td>
<td>hyi-oi</td>
</tr>
<tr>
<td>cyri-os</td>
<td>on-os</td>
<td>oic-os</td>
</tr>
</tbody>
</table>

Rough table to see occurrence:

<table>
<thead>
<tr>
<th>Ho tu</th>
<th>owner’s donkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho tu</td>
<td>house’s owner</td>
</tr>
<tr>
<td>Ho ton</td>
<td>sons’ slave</td>
</tr>
<tr>
<td>Ho ton</td>
<td>brothers’ house</td>
</tr>
<tr>
<td>Hoi tu</td>
<td>trader’s brothers</td>
</tr>
<tr>
<td>Hoi ton</td>
<td>donkeys’ traders</td>
</tr>
<tr>
<td>Hoi ton</td>
<td>owners’ sons</td>
</tr>
<tr>
<td>Hoi ton</td>
<td>slaves’ owners</td>
</tr>
</tbody>
</table>

SOLUTION:

Rules:
1. word order:
   Ho / Hoi, tu / ton owner, thing owned

2. Ho is in phrases where the ‘thing owned’ is singular.
   Hoi is in phrases where the ‘thing owned’ is plural.

3. Tu is in phrases where the owner is singular.
   Ton is in phrases where the owner is plural.

4. Endings on nouns
   -u  - owner is singular
   -on - owner is plural
   -oi - thing owned is plural
   -os - thing owned is singular

Vocabulary:

donkey    on-
owner     cyri-
trader    empor-
brother   adelph-
son       hyi-
slave     dul-
house     oic-
Example 6

Below are few sentences with their English translations. Write the rules and the dictionary from these examples and translate few sentences.

Hiiri teatteressa on.  
Cow is in theatre.
Sikri poydalta hyppaa.  
Hen jumps off table.
Hiiri poydalla istuu.  
Bull sits on table.
Sikri liiterissa istuu.  
Hen sits in workshop.
Hiiri liitenlta hyppaa.  
Bull jumps off workshop.

Translate:

Bull sits on theatre.
Rooster jumps off theatre.

Solution

Translations:

Bull sits on theater.  
Rooster jumps off theater.

Dictionary:

hiiri = cow, bull
sikri = hen, rooster
teattere = theater
poyda = table
liiteri = workshop
on = is (to be)
hyppa = jumps (to jump)
istuu = sits (to sit)

Rules:

Endings (these can go under dictionary or under rules):

- ssa = in
- -lta = off
- -lla = on

- Word order: who, where, what is doing
  (Alternative word order description: subject, location or object, verb)
- Word for location gets an ending for proposition (see above the list of endings with their meanings) or alternative phrasing is “how the object is used” (off table, on table)
- They don’t distinguish between animal gender.
  (Alternative: They use the same word for male and female.)
Example 7

Below are few sentences with their English translations. Write the rules and the dictionary from these examples and translate few sentences.

Mi leg kabeag. This was clean dish.
Mir Aneešt. This will be Anna.
Mi ien šhuahti. This is green table.
Mi ien kabešt. This will be clean table.
Mir kiel phaw. This is strict boy.
Mi kel šhuaitiešt. This will be green city.

Translate:
This is Dima.
This was strict Anna.
This was city.

Solution

Translations
This is Dima. Mir Dima.
This was strict Anna. Mir Ane phaw eag
This was city. Mi keleag

Dictionary
Ane = Anna
leg = dish
ien = table
kiel = boy
kel = city
kab = clean
šhuahti = green
phaw = strict
mi, mir = this

Rules
Endings (these can go under dictionary or under rules):
-eag = past tense
-ešt = future tense

- Word order: mi/mir, noun, adjective
(alternative descriptions for mi/mir are also correct: this, pronoun)
- mi is used for objects, mir is used for people
- The last word gets ending for tense (see above for the list). Present tense has no ending.
(alternative description for this rule: adjective gets the tense ending. If there is no adjective then the noun gets the ending. Other alternatives also exist)
Example 8 - symbol = word

Here you have some sentences written in foreign script and with Latin letters. Figure out what each foreign symbol means and write any rules that you observe.

- Man is writing a letter.
- Woman is writing a letter.
- Man wrote a letter.
- Man sees a letter.

Write with foreign symbols:

- Woman saw a letter.
- Man saw a woman.

What kind of writing system is this (what each symbol represents), what is the direction of writing, are there any additional rules for symbols?

Rules

Writing system type: Symbol = word
Direction – L-R
Word order: SVO
Present tense - hat ^, past tense ’ big apostrophe/comma
Example 9 - symbol = letter

Here are written the names Iva, Maja, Vid. Which is which? What kind of writing system is this (what each symbol represents), what is the direction of writing, are there any additional rules for symbols?

Rules
Writing system: top to bottom (i tells you direction)
Each symbol reps a letter
No additional rules?
Japanese Braille

This is another writing system problem, but in this case it is not an alphabet. The word karaoke, in tenji, it has four characters, which may lead us to think that each character represents a syllable (ka-ra-o-ke). Counting syllables of the other words can confirm that tenji is a syllabary.

Inside the syllable structure, however, we must understand how consonants and vowels are represented. From “karaoke” can see that ka and ra have the same upper-left dot (❼), differing only on the second dot position; furthermore, ka and ke have the same second dot position (down-right – ⧸). This is confirmed for there is a word starting with a (atari) and word f indeed starts with ?: So the vowels are represented in the three dots at the upper-left part of the diagram:

a  i  u  e  o

The other three dots represents the variety of consonants. So the answers are:

1.  
   a. haiku  
   b. sake  
   c. katana 
   d. kimono 
   e. koi 
   f. atari 

2.  
   g. karate  
   h. anime 

3.  
   i. ?? : ? : 
   j. : : : 

Lalana Chinantec

This is another syntax problem, in a model we call Rosetta Stone, some sentences are presented with translations and, with that, we can understand part of the grammar of the language.

In this case, the word order is not so obvious. We can start by marking the substantives: corn (x4) and pineapples (x2). After this, we can easily identify the pronoun “my” (x3). We can even paint the words, like this:

Kalakwa: kwì: li:?

Miladjo: mo: h kya

Li: ? kalana kwì: kwa: kya

Djo kalaro: h mo: h ne kya

Kaladjo: kwì:

Milakwa: kwì:

The beautiful corn grew.

My pineapples have turned out well.

My tall corn yellowed beautifully.

My yellow pineapples ripened well.

The corn turned out well.

The corn has grown
Then the verbs. From the last two sentences, it is obvious that they have internal structure: verbs in the past simple receive **kala**-; verbs in the present continuous receive **mila**-.

The adjectives come after the substantives, as in **mo:h ne** / pineapple yellow and **kwi: li:ʔ / corn beautiful**. To use an adjective as a verb, one just have to use a verb prefix, as in **ne – kala ne / yellow – yellowed** and **kwa: – kalakwa: / tall – grew – has grown**.

The adverb comes in the beginning of the sentence, as in **li:ʔ / beautifully** and **ʤö / well**. (Don’t mistake: the “well” in **turned out well** is part of the verb). Adverbs, adjective and verb nucleus have all the same form.

So the general word order is: (Adverb) Verb – Subject (Adjective) (Possessive)

And the answers are:

1. **li:ʔ** is beautiful(ly).  
2. **ro:h** is ripe.

3.  
   a) **kalali:ʔ mo:h ḍöö**  
   PAST-(become beautiful) **pineapples** (good/well)ADJ
   b) **Ḥö milane mo: h ro:h kya** (well)ADV [PRES.PERF-(yellow) **corn** (ripe)ADJ (my)]

4.  
   c) The yellow corn has ripened.
   d) The corn grew beautifully.
Lalana Rough Work Example and Solution

Dictionary
kwi: corn
mo:h pineapples
kya my
li:ʔ Beautiful and beautifully
dzo well
ro:h ripe
kwa: tall

Rules
Verbs:
Past simple receive prefix kala-
(kalakwa, kaladzö,kalaro:h)
Present continuous receive mila-
(mila$kwa, miladzö)

Adjectives:
Adjectives come after the word they describe (kwi: li:ʔ / corn beautiful) (mo$h ne / pineapple yellow)
Using adjective as a verb – add a verb prefix e.g (ne – kalane / yellow – yellowed) and
(kwa/kalakwa/mila$kwa – tall/grew/has grown)

Adverbs:
Come at the beginning of the sentence (li:ʔ / beautifully) Word order:
(Adverb) Verb – Subject (Adjective) (Possessive)

Answers:
1. li:ʔ is beautiful(ly).
2. ro:h is ripe.
3. a) kalaliʔ mo$h dʒö PAST-(become beautiful) pineapples (good/well)ADJ
   b) dʒö milane mo$h ro:h kya (well)ADV [PRES.PERF-(yellow) corn (ripe)ADJ (my)]
4. c) The yellow corn has ripened.
   d) The corn grew beautifully.