Example 1

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.
2. Makeri dawo wuta.

Translate from english:
1. The boy started the fire.
2. The smith returned.
Example 2

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 a kai
2. lende a gbomu

Translate from english:
1. man’s snake
2. snake’s eye
Example 3

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:
1. ja kai
2. lende a gbomu

Translate from English:
1. man’s snake
2. snake’s eye
Example 4

Here are a 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 binjinin        chameleon
14. bangul gula                koala
15. bangul bargan           kangaroo

Fill in the blanks:

1. _________ mugunanja    aunt
2. _________ munga         sound
3. _________ bayimbam   butterfly
4. _________ amo            weapon
5. _________ nalnga        boy
Example 5

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

<table>
<thead>
<tr>
<th>Greek</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ho tu cyriu onos</td>
<td>owner’s donkey</td>
</tr>
<tr>
<td>2. hoi tu emporu adelphoi</td>
<td>trader’s brothers</td>
</tr>
<tr>
<td>3. hoi ton onon emporoi</td>
<td>donkeys’ traders</td>
</tr>
<tr>
<td>4. hoi ton cyrion hyioi</td>
<td>owners’ sons</td>
</tr>
<tr>
<td>5. ho ton hyion dulos</td>
<td>sons’ slave</td>
</tr>
<tr>
<td>6. hoi ton dulon cyrioi</td>
<td>slaves’ owners</td>
</tr>
<tr>
<td>7. ho ton adelphon oicos</td>
<td>brothers’ house</td>
</tr>
<tr>
<td>8. ho tu oicu cyrios</td>
<td>house’s owner</td>
</tr>
</tbody>
</table>

Translate from English:
1. traders’ houses
2. slave’s donkeys

Translate into English:
1. ho tu onu emporos
2. ho ton dulon dulos
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 poydalla hyppää.     Hen jumps off table.
Sikri liiterissa istuu.     Hen sits in workshop.

Bull sits on theatre. ________________
Rooster jumps off theatre. ________________
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 šhuahtiešt. This will be green city.

This is Dima. ___________________________
This was strict Anna. ___________________________
This was city. ___________________________
Example 8

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.
  ![Symbol for man writing a letter]

- Woman is writing a letter.
  ![Symbol for woman writing a letter]

- Man wrote a letter.
  ![Symbol for man writing a letter]

- Man sees a letter.
  ![Symbol for man seeing a letter]

Write with foreign symbols:

- Woman saw a letter.
  ![Symbol for woman seeing a letter]

- Man saw a woman.
Example 9

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?
Japanese Braille

*Braille* is a tactile writing system, based on a series of raised dots, that is widely used by the blind. It was invented in 1821 by Louis Braille to write French, but has since been adapted to many other languages. English, which uses the Roman alphabet just as French does, required very little adaptation, but languages that do not use the Roman alphabet, such as Japanese, Korean, or Chinese, are often organized in a very different manner!

To the right is a Japanese word written in the *tenji* (“dot characters”) writing system. The large dots represent the raised bumps; the tiny dots represent empty positions.

karaoke  

1. The following *tenji* words represent *atari, haiku, katana, kimono, koi,* and *sake*. Which is which? You don’t need to know either Japanese or Braille to figure it out; you’ll find that the system is highly logical.

   a.  
   b.  
   c.  
   d.  
   e.  
   f.  

2. What are the following words?

   g.  
   h.  

3. Write the following words in *tenji* characters:

   i. samurai  
   j. miso  

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Problem by Patrick Littell
for the North American Computational Linguistics Olympiad 2009
Lalana Chinantec

Lalana Chinantec is a language spoken by approximately 10,000 people who live in the Oaxaca region of Mexico. In the following orthography a colon (:) marks a long vowel, and the ? symbol marks a glottal stop (like the sound in the middle of uh-oh).

- kalakwa: kwi: li:? The beautiful corn grew.
- miladjö mo:h kya My pineapples have turned out well.
- li:? kalane kwi: kwa: kya My tall corn yellowed beautifully.
- dğö kalaro:h mo:h ne kya My yellow pineapples ripened well.
- kaladjö kwi: The corn turned out well.
- milakwa: kwi: The corn has grown.

1. What does the word li:? mean? __________________________
2. What does the word ro:h mean? __________________________

3. Translate the following sentences into Lalana Chinantec:
   a) The good pineapples became beautiful.
   __________________________
   b) My ripe corn has yellowed well.
   __________________________

4. Translate the following sentences into English:
   c) milaro:h kwi: ne
   __________________________
   d) li:? kalakwa: kwi:
   __________________________