$$\underset{3 \times 400 + 4 \times 20 + (15+1)}{1296} = 1296 \tag{13}$$

$$\underset{1 \times 400 + 1 \times 20 + (10+2)}{432} = \underset{2 \times 216}{432} \tag{14}$$

$$\underset{1 \times 400}{400} = \underset{216 + 5 \times 36 + 4}{400} \tag{15}$$

$$\underset{1 \times 8000}{8000} = \underset{7776 + 216 + 6 + 2}{8000} \tag{16}$$

(b)
- $42 = 2 \times 20 + 2$: *öm-pöhualli-om-öme*;
- $494 = 1 \times 400 + 4 \times 20 + 10 + 4$: *cen-tzontli-on-näuh-pöhualli-om-mahtlactli-on-nähui*.

(c)
- $43 = 36 + 6 + 1$: fete nimbo ngámbi;
- $569 = 2 \times 216 + 3 \times 36 + 4 \times 6 + 5$: yànparo tarumba yenówe fete asàr tàxwo tambaroy.

Problem 2. Structure of the verb form:

I.
> – **me-**: affirmative form, present, indicative mood,
>
> – ROOT,
>
> – **-pe** 'really', **-fe** 'pretend to', **-f** 'be able to', **-n** — infinitive.
>
> In this part of the word:
>
> 1. C + -C > CəC (**de** + **-f** + **-n** > **de-f-ə-n**, **me-** + **bəb** + **-pe** > **me-bəb-ə-pe**).
>
> 2. The last syllable receives the stress if it is closed, otherwise the penultimate is stressed (**defən** > **defə́n**, **mešxepe** > **mešxépe**).
>
> 3. CéC(C)e > CáC(C)e (**méšxe** > **mášxe**, **mešxépe** > **mešxápe**).

II. **-xe** — plural, **-t** — past, **-me** — conditional mood, **-q̇əm** — negative form.

Answers:

(a)
ʒeq̇én	*to bite*
medéf	*(he/she) is able to sew*
medáfe	*(he/she) is pretending to sew*
səfə́n	*to be able to burn*
megʷəš'ə́ʔe	*(he/she) is speaking*
mebə́b	*(he/she) is flying*

(b)
çentχʷéfme	*if (he/she) is able to slide*
šxáfexeq̇əm	*(they) aren't pretending to eat*
bəbə́ft	*(he/she) was able to fly*
šxet	*(he/she) was eating*
ṭəgʷərəgʷə́peme	*if (he/she) really is trembling*

(c)

mádexe	*(they) are sewing*
mebəbə́fexe	*(they) are pretending to fly*
sə́pet	*(he/she) really was burning*
šxéfq̇əm	*(he/she) isn't able to eat*
gʷəš'ə́ʔexeme	*if (they) are speaking*
meʒáq̇exe	*(they) are biting*

Problem 3.

(a)   1. Leave the first letter in place.

     2. Delete *h* and *w*.

     3. Replace all consonant letters with digits (letters whose most common sounds are similar are grouped together):

bpv (f)	cgjkqs (xz)	dt	l	mn	r
1	2	3	4	5	6

     4. Reduce any sequence of two or more identical digits to a single digit.

     5. Delete all vowels (*a, e, i, o, u, y*).

     6. Leave only the first three digits or add zeroes on the right to make the code one letter and three digits long.

(b) *Allaway*: A400, *Anderson*: A536, *Ashcombe*: A251, *Buckingham*: B̲252, *Chapman*: C155, *Colquhoun*: C42̲5, *Evans*: E152, *Fairwright*: F̲623, *Kingscott*: K̲52̲3, *Lewis*: L20̲0, *Littlejohns*: L̲342, *Stanmore*: S356, *Stubbs*: S312, *Tocher*: T2̲60̲, *Tonks*: T520, *Whytehead*: W̲330.

(c) *Ferguson*: F622, *Fitzgerald*: F326, *Hamnett*: H530, *Keefe*: K100, *Maxwell*: M240, *Razey*: R200, *Shaw*: S000, *Upfield*: U143.

Problem 4.   Rules:

- Word order: V P (S/O); S/O P V Poss, V P Poss; S Poss.

- V = verb (past → future: **-bi** → **-ba**, ∅ → **-jba**).

- S = subject (noun). The subject of a transitive verb gets the ending **-ni**.

- O = object (noun).

- P = pronouns (subject + object) + tense:

  - subject:
    * 1st **ngV-**,
    * 2nd **nyV-**,

    * 3rd $\begin{cases} \text{intransitive verb:} & \boldsymbol{gV\text{-}} \\ \text{transitive verb:} & \begin{cases} \text{masculine} & \boldsymbol{gVnV\text{-}} \\ \text{feminine} & \boldsymbol{ngVyV\text{-};} \end{cases} \end{cases}$

  - object: 1st **-ngV**, 2nd **-nyV**, 3rd -∅;