# Numerals in Zeme <br> Sapam Sangita Chanu <br> Ph.D Scholar <br> Assam University, Silchar 


#### Abstract

The goal of the present paper is to describe some of the morpho-syntactic aspects of numerals in Zeme (mainly focus on the language spoken in Tousem sub- division of Tamenglong district of Manipur). Zeme is one of the endangered languages of North East India which is mainly spoken in Tousem sub-division of Tamenglong district, Tadubi sub-division of Senapati district of Manipur, Peren district of Nagaland and Dima Hasao District of Assam. Linguistically, Zeme belongs to the Kuki-Naga section of the Kamarupan group of the Baric sub-division of TibetoBurman family of languages (Matisoff, 2001). As in many other Tibeto-Burman languages, numeral system in Zeme is mainly of the decimal type; however, the vigesimal system is also found in the language from numerals twenty/20 to twenty-nine/29. Structurally, numerals in the language can be categorized into seven major types viz. (i) cardinals (ii) ordinals (iii) fractional (iv) multiplicative (v) distributives (vi) restrictive and (vii) approximates. Syntactically, the numerals usually follow the head nouns as in other SOV languages.


Key words: Zeme, Tibeto-Burman, Tamenglong, Manipur, Numerals, Decimal, Vigesimal, Compound.

## 1. Introduction

Zeme is a Tibeto-Burman language of Northeast India spoken by the people in the same name. Zeme is one of the sub-tribes of Zeliangrong. The term 'Zeliangrong' is a composite name of the cognate tribes of Zeme, Liangmei and Rongmei. It is generally believed that these three tribes are the descendents of the same ancestor with similar culture, tradition and customs. It is one of the thirty-three recognized scheduled-tribes of Manipur including recently recognized three scheduled tribes namely Paomei, Tarao and Kharam (Manipur Gazette, 2003). Linguistically, Zeme belongs to the Kuki-Naga section of the Kamarupan group of the Baric sub-division of Tibeto-Burman family of languages (Matisoff, 2001). The speakers of Zeme are

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mainly found in Tousem sub-division of Tamenglong and Tadubi sub-division of Senapati districts of Manipur. Besides, few speakers of Zeme are also found in Dima Hasao District of Assam and Peren district of Nagaland. According to 2001 Census of India, the total population of Zeme in India was 34,110.

As in other indigenous tribes of Manipur, Zeme have their heritage language and culture which have been inherited from their forefathers. However, they do not have their own script and written literature. Consequently, the language is not being taught in the schools as a medium of instruction or a subject.

## 2. Typological Overview of Zeme

(i) Like most of the Tibeto-Burman languages, Zeme is a tonal language.
(ii) As in many other TB languages, aspirated voiced stops $b^{h}, d^{h}$ and $g^{h}$ are totally absent in the language.
(iii) Interestingly, the occurrence of $/ \eta /$ in word initial position of a word is frequently noticed in the language.
(iv) Most of the words in the language are monosyllabic in nature, however some disyllabic and tri-syllabic words are also found in the language.
(v) Gender distinction in Zeme is determined on the basis of natural recognition of sex, i.e., gender is not marked grammatically in this language. Hence, Zeme has natural gender.
(vi) Number is not grammatically significant in Zeme i.e., there is a no subject-verb agreement for number distinction.
(vii) Negation in Zeme is formed by means of affixation i.e., particularly the suffixation.
(viii) The basic word order in Zeme is SOV. However, the alternative order of words in the language is OSV. Thus Zeme is a V-final language.

## 3. Numerals in Zeme

Zeme being a TB language, numeral system in Zeme is mainly of the decimal type. However, the Vigesimal system is also found in the language. As in many South Asian languages in general and Tibeto-Burman languages in particular, compounding is the productive morphological process to form the higher numerals in the language. Numerals in Zeme can be classified in the following categories:

1. Cardinal Numerals
2. Ordinal Numerals
3. Fractional Numerals
4. Multiplicative Numerals
5. Distributive Numerals
6. Restrictive Numerals
7. Approximate Numerals

### 3.1. Cardinal Numerals

Structurally, cardinal numerals in Zeme can be sub-classified into two types: (i) basic numerals and (ii) compound numerals.

### 3.1.1. Basic Numerals

The basic numerals from one to ten in Zeme are bound roots which always take numeral formative prefixes in the form of $\partial-$, $k e-, k a-$, $m a-$, $s a-$, and $t z-$. It is interesting to note that different prefixes are used to form the basic cardinal numerals in Zeme as can be seen in the following table:

| Value | Gloss | Num | Value | Gloss | Num |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | One | a-ket | 6 | six | sə-rok |
| 2 | Two | ke-na | 7 | seven | sə-na |
| 3 | three | kə-čum | 8 | eight | tə-set |
| 4 | four | mə-dai | 9 | nine | sa-kui |
| 5 | Five | mə-ŋəiyu | 10 | ten | ka-raiyu |
| 20 | twenty | iŋkai | 100 | hundred | hai |
| 1000 | thousand | čaŋ |  |  |  |

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Table no.1: Basic numerals in Zeme
It is observed that the numeral 'one' has nominal formative prefix $\partial$-, the numeral 'two' has prefix ke-, the numeral 'three' and 'ten' have prefix ka-, the numeral 'four' and 'five' have prefix ma- and the numeral 'six', 'seven' and 'nine' have prefix sa- respectively. However, the numerals twenty, hundred and thousand behave different from the other basic numerals i.e., they do not take any kind of prefixes or suffixes in their underlying form. It is also observed that numeral roots like ket 'one', na 'two', čum 'three', yəiyu 'five', rok 'six', na 'seven' and kui 'nine’ seems to be Proto-Tibeto-Burman numerals as *kat, *g-ni-s, *g-sum, *l-ŋa~*b-ŋa, *d-ruk, $*_{s-n i s}$ and $* d-k u w$ as reconstructed by (Benedict, 1972, Matisoff, 1995).

### 3.1.2. Compound Numerals

Compound numerals are large in number and more productive to form higher numerals in the language as mentioned earlier. Compound numerals can be sub classified into the following categories: (i) Additive compound numerals (ii) Multiplicative compound numerals and (iii) Multiplicative cum additive compound numerals.

### 3.1.2.1. Additive Compound Numerals

The numerals from 11/eleven to 19/nineteen are additive numerals in the language; they are formed by the addition of basic numerals from $1 /$ one to $9 /$ nine to decade karaiyu ' 10 '. In the case of additive numeral compound, the higher numeral usually precedes the lower numeral i.e., the head is in the left of the compound word. It is also interesting to note that the numeral formative prefix $\partial$ - is being dropped to form the higher numeral 10 onwards i.e., 11, 21, 31, 41, and so on. However, the rest of the numeral formative prefixes like $k \partial-$, $k e$-, ma-, ta- and sa- are remained as prefixes to the respective numerals as can be illustrated in the following examples:

| karaiyu-ket <br> $[10+1=11]$ | 'eleven' |
| :--- | :--- |
| karaiyu-kena <br> $[10+2=12]$ | 'twelve' |
| karaiyu-kačum |  |
| $[10+3=13]$ | 'thirteen' |


| karaiyu-madai $[10+4=14]$ | 'fourteen' |
| :---: | :---: |
| karaiyu-таทaiyu $[10+5=15]$ | 'fifteen' |
| karaiyu-sarok $[10+6=16]$ | 'sixteen' |
| kərəiyu-səna $[10+7=17]$ | 'seventeen' |
| karaiyu-taset $[10+8=18]$ | 'eighteen' |
| kərəiyu-səkui $[10+9=19]$ | 'nineteen' |

As mentioned above that Zeme has vigesimal numeral iykai ' 20 ' as it is found in very few Tibeto-Burman languages of North East India namely Manipuri (Yashawanta, 2000), Dimasa (Dhiren, 2013), Rongmei (Deb, 2015) etc. The presence of vigesimal numeral ipkai '20' is one of the typical features of Zeme language in the Tibeto-Burman language family. The formations of numerals from 21/twenty-one to 29/twenty-nine are demonstrated below:

| inkai-ket $[20+1=21]$ | 'twenty-one' |
| :---: | :---: |
| inkai-kena $[20+2=22]$ | 'twenty-two' |
| iŋkai-kəčum $[20+3=23]$ | 'twenty-three' |
| iykai-madai $[20+4=24]$ | 'twenty-four' |
| iŋkai-maŋaiyu $[20+5=25]$ | 'twenty-five' |

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$$
\begin{array}{ll}
\text { iykai-sarok } & \text { 'twenty-six' } \\
{[20+6=26]} & \\
\text { inkai-sakui } & \text { 'twenty-nine } \\
{[20+9=29]} &
\end{array}
$$

### 3.1.2.2. Multiplicative Compound Numerals

The multiplicative compound numeral from 30/thirty to 39/thirtynine is formed by the multiplication of basic numeral 3/three to decade raiyu 'ten'. In case of multiplication, the him 'three', the allomorph of kəčum is used to take part to form the higher numerals from 30 to 39. It is also interesting to note that the lower numeral precedes the higher numeral in the formation of following set of numerals as demonstrated below:

| him-raiyu $[3 \times 10=30]$ | 'thirty' |
| :---: | :---: |
| him-raiyu-ket $[3 \times 10+1=31]$ | 'thirty-one' |
| him-raiyu-kena $[3 \times 10+2=32]$ | 'thirty-two' |
| him-raiyu-kəčum $[3 \times 10+3=33]$ | 'thirty-three' |
| him-raiyu-mədai $[3 \times 10+4=34]$ | 'thirty-four' |
| him-raiyu-maŋaiyu $[3 \times 10+5=35]$ | 'thirty-five' |
| him-raiyu-sarok $[3 \times 10+6=36]$ | 'thirty-six' |
| him-raiyu-səna $[3 \times 10+7=37]$ | 'thirty-seven' |
| him-raiyu-taset $[3 \times 10+7=37]$ | 'thirty-eight' |

$$
\begin{aligned}
& \text { him-raiyu-sakui } \\
& {[3 \times 10+7=37]}
\end{aligned} \quad \text { 'thirty-nine' }
$$

Conversely, the decade numerals from $40,50,60,70,80$, and 90 are formed by multiplication of decade by basic numerals from 4/four to 9/nine respectively. It is important to note that the numeral 'ten' in Zeme has four allomorphs: karaiyu, he, riy and riyak. Interestingly the decade he used to form numeral from 41-49 and the allomorph riy is used to form the numerals from 51-59, however the allomorph riyak is explicitly used to form higher numerals from 60-90 as can be seen in the following examples:

| he-dai $[10 \times 4=40]$ | 'forty' |
| :---: | :---: |
| riy-yวiyu $[10 \times 5=50]$ | 'fifty' |
| riyak-sarok $[10 \times 6=60]$ | 'sixty' |
| riyak-səna $[10 \times 7=70]$ | 'seventy' |
| riyak-tzset $[10 \times 8=80]$ | 'eighty' |
| riyak-səkui $[10 \times 9=90]$ | 'ninety' |

In the formation of higher numerals $30,40,50,60,70,80$, and 90 Matisoff (1995) rightly pointed out that "In many Kuki-Naga languages all the round numerals from 30-90 are multiplicative decimal construction, but the formation of ' 30 ' is different from ' 40 ' and above. THIRTY is expressed as $3 \times 10$, with the morpheme for TEN based on the independent ' 10 ', and the UNIT morpheme PRECEDING this TEN morpheme; '40, $50 \ldots . .90$ ' are expressed as 10 X 4 , 10X5......10X9, with the UNIT morpheme following this TEN morpheme." This is true in the case of Zeme as well, that the numeral thirty is expressed as 3 X 10 i.e., the UNIT morpheme precedes the ten morphemes.
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The century numerals from one hundred to nine hundred (100-900) are formed by multiplication the century root hai ' 100 ' to the basic numerals one to nine (1-9) as follows:

| hai-ket | 'one hundred' |
| :--- | :---: |
| hai-na | 'two-hundred' |
| hai-čum | 'three-hundred' |
| hai-mədai | 'four hundred' |
| hai-məŋəiyu | 'five hundred' |
| hai-sərok | 'six hundred' |
| hai-səna | 'seven hundred' |
| hai-təset | 'eight hundred' |
| hai-səkui | 'nine hundred' |

It is observed that the numeral formative prefixes $\partial^{-}$, $k e$ - and $k z^{-}$, are being dropped to form the higher numerals such as one hundred, two hundred and three hundred however the numeral formative prefix $m ə-s \partial-t z$ - are used to form higher numeral such as four hundred, five hundred, six hundred, seven hundred, eight hundred and nine hundred as illustrated above.

Similarly, the numerals from one thousand to nine thousand are also formed by multiplication of the root čaך 'thousand' to the basic numerals from one to nine. It is worth mentioning here that the numeral formative prefixe $\partial$ - is being dropped to form the higher numeral one thousand however, the numeral formative $k e-$, $m z-, k z-, s z-$, $t z-$ are remained as prefixes to form the numerals such as two thousand, three thousand and so on as illustrated in the following examples:

| čə $y$-ket | 'one thousand' |
| :--- | :--- |
| čə $\eta$-kena | 'two thousand' |
| čə $\eta$-kečum | 'three thousand' |
| čə |  |
| -mədai | 'four thousand' |

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| čəク－тәудіуи | ＇five thousand＇ |
| :--- | :--- |
| čəク－sərok | ＇six thousand＇ |
| čəク－səna | ＇seven thousand＇ |
| čəク－təset | ＇eight thousand＇ |
| čəク－səkиi | ＇nine thousand＇ |

## 3．1．2．3．Multiplicative cum additive compound numerals

Numerals from 41－49，51－59，61－69，71－79，81－89，91－99 in Zeme are formed through the multiplication of first two numerals and the summation of the third ones．

| he－dai－ket $[10 \times 4+1=41]$ | ＇forty－one＇ |
| :---: | :---: |
| he－dai－madai $[10 \times 4+4=44]$ | ＇forty－four＇ |
| riy－ŋəiyu－ket $[10 \times 5+1=51]$ | ＇fifty－one＇ |
| riŋ－ŋəiyu－sarok $[10 \times 5+6=56]$ | ＇fifty－six＇ |
| riyak－sarok－ket $[10 \times 6+1=61]$ | ＇sixty－one＇ |
| riyak－sarok－səkui $[10 \times 6+9=69]$ | ＇sixty－nine＇ |
| riyak－səna－ket $[10 \times 7+1=71]$ | ＇seventy－one＇ |
| riyak－səna－səna $[10 \times 7+7=77]$ | ＇seventy－seven＇ |
| riyak－taset－ket $[10 \times 8+1=81]$ | ＇eighty－one＇ |

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$$
\begin{aligned}
& \text { riyak-taset-səkui 'eighty-nine’ } \\
& \text { [10 x } 8+9=89 \text { ] } \\
& \text { riyak-sakui-ket 'ninety-one' } \\
& \text { [10×9 + 1 = 91] } \\
& \text { riyak-səkui-səkui 'ninety-nine' } \\
& \text { [10 x } 9+9=99]
\end{aligned}
$$

### 3.2. Numerals in Noun Phrase Construction

Syntactically, numeral is one of the optional grammatical elements in a Noun Phrase in Zeme. Functionally numeral is a modifier of the head noun in Zeme Noun Phrase and the numeral follows the head noun without any exception. So the order of numerals in an NP is [Noun + numerals] as in (1)-(2). However, if the head noun is modified by an adjectival and a numeral, the order is the head noun followed by the adjectival, followed by the numerals as can be seen in (3)-(4):

| (1) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| (2) | a-gu $[\text { heki kena] }]_{N P}$ <br> 1PP-GEN $\quad$ house two  <br> 'I have two houses.'  |  |  | la-lai <br> EXIST-DECL |  |
| (3) | i-ne <br> i-NOM <br> 'I saw five | [nəmrui bird black bird | tik-be <br> black-NMZ | məクวiуи $_{N P}$ <br> five | уди-lai <br> see-DECL |
| (4) | i-ne <br> i-NOM <br> 'I caugh | [haka fish o big fish | di-be big-NMZ | $\begin{aligned} & \text { kenal }_{N P} \\ & \text { two } \end{aligned}$ | $t i-l a i$ <br> catch-DECL |

Like many other Tibeto-Burman languages, the plural morphemes in Zeme cannot cooccur with numerals i.e., if the numerals are present in a Noun Phrase construction, the plural
morphemes are being dropped. In other words, the plurality is expressed by numerals rather than plural morphemes as shown in the following examples:


| i-ne $\quad$ hetai | gi-be | kačum-du | lak-lai |
| :--- | :--- | :--- | :--- | :--- |
| i-NOM dog red-NMZ | three-ACC | beat-DECL |  |
| 'I beat three red dogs.' |  |  |  |

### 3.3. Ordinals Numerals

Like many other Tibeto-Burman languages, the ordinal numerals in Zeme are formed by means of affixation mostly by prefixation and suffixation except in the case of ordinal 'first'. In other words, the ordinal railay-be 'first' is formed by suffixing nominalizer -be to the root morpheme railaŋ. However, the rest of the ordinal numerals such as second, third, etc. are formed by prefixing pa- and suffixing -be to the numeral root respectively, however, the railaybe 'first' is merely a suppletive form which is found in many other Tibeto-Burman languages namely Manipuri, Dimasa, Rongmei, Kok-Borok etc. The following examples show the formation of ordinal numerals in the language.

| railay-be | 'first' |
| :--- | :--- |
| pa-kena-be | 'second' |
| pa-kəčum-be | 'third' |
| pa-mədai-be | 'fourth' |
| pa-məךəiyu-be | 'fifth' |

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| pa-sərok-be | 'sixth' |
| :--- | :--- |
| pa-səna-be | 'seventh' |
| pa-təset-be | 'eight' |
| pa-səkui-be | 'ninth' |

### 3.4. Fractional Numerals

In Zeme, the lexical items for 'half', 'piece' and 'quarter' are the only basic fractional numerals found in the language. It is interesting to note that all lexical items indicating half, piece and quarter in Zeme is word bilabial initial. It is also worth mentioning here that the fractional numeral in the language is very rare as few fractional numerals are noticed in the language. Thus it is one of the typical features of Tibeto-Burman languages as shared by Zeme and its sister languages. Fractional numerals found in Zeme are illustrated in the following examples:

| pepi | 'half' |
| :--- | :--- |
| pдsap | 'piece' |
| рәdəи | 'quarter' |

### 3.5. Multiplicative Numerals

Multiplicative numerals in Zeme are formed by prefixing the morpheme lo- to the corresponding cardinal numerals. It is generally used when a question arises "how many times or how many folds" as many other Tibeto-Burman languages do. The multiplicative numerals in Zeme are shown below:

| lo-ket | 'once' |
| :--- | :--- |
| lo-na | 'twice' |
| lo-čum | 'thrice' |
| lo-madai | 'four times' |
| lo-maŋaiyu | 'five times' |
| lo-sarok | 'six times' |
| lo-karaiyu | 'ten times' |

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### 3.6. Distributive Numerals

Distributive numerals in Zeme are formed by reduplicating the cardinal numerals. It is observed that the entire numerals are not reduplicated rather the numeral roots are being reduplicated as can be seen in the following examples:

| aket-ket | 'one each' |
| :--- | :--- |
| kena-na | 'two each' |
| kəčum-čum | 'three each' |
| mədai-dai | 'four each' |
| məŋəiyu-ŋəiyи | 'five each' |
| sərok-rok | 'six each' |
| səna-na | 'seven each' |
| təset-set | 'eight each' |
| səkui-kui | 'nine each' |
| kərəiyu-rəiyu | 'ten each' |
| inkai-kai | 'twenty each' |
| haiket-ket | 'hundred each' |

### 3.7. Restrictive Numerals

Restrictive numerals in Zeme are formed by suffixing -rinne to the cardinal numerals as shown in the following examples:

| ke-rinne | 'only one' |
| :--- | :--- |
| kena-rinne | 'only two' |
| kačum-rinne | 'only three' |
| madai-rinne | 'only four' |
| karaiyu-rinne | 'only ten' |
| haiket-rinne | 'only hundred' |

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### 3.8. Approximate Numerals

The approximate numerals in Zeme are formed by adding the loan morpheme gum 'about' probably from Manipuri followed by nominalizer -be with the corresponding cardinal numerals as can be seen in the following examples:

| leisi <br> book | тәүәiуи-gит-be five-about-NMZ | 'about five books' |
| :---: | :---: | :---: |
| heki <br> house | karaiyu-gum-be ten-about-NMZ | 'about ten houses' |
| $\begin{aligned} & \text { hetzi } \\ & \operatorname{dog} \end{aligned}$ | kečum-gum-be three-about-NMZ | 'about three dogs' |

### 3.9. Conclusions

From the above analysis, it can be concluded that Zeme numerals are mainly of Decimal type. Interestingly, the Vigesimal system, i.e., twenty base numerals are also found in the language however they are not productive in many ways and no significant role played to form the higher numerals in the language. The basic numerals from one to ten in Zeme are bound roots which always take numeral formative prefixes in the form of $\partial-, k e-, k ə-, m \not z-$, $s z-$, and $t ə-$. However, numerals namely twenty, hundred and thousand are free morphemes i.e., they do not take any kind of affixes in their underlying form. More interestingly, the numeral 'ten' in the language has four allomorphs: karaiyu, he, rij and riyak. Consequently, the karaiyu is used to form numerals from 10 to 19 , the he is used to form numeral from 41-49 and the riy is used to form the numerals from 51-59, however the allomorph riyak is explicitly used to form higher numerals from 60-90. Like many other Tibeto-Burman languages, the ordinal numerals in Zeme are formed by means of affixation mostly by prefixation and suffixation except in the case of ordinal 'first' as it is formed by suffixing nominalizing morpheme -be to the root morpheme railay. The fractional numerals in the language are very rare compare to other cardinal numerals. Finally, the plural morpheme in the language cannot co-occur with numerals as many other SinoTibetan languages do.

## Abbreviations

ACC Accusative
DECL Declarative
EXIST Existential
GEN Genitive
NP Noun Phrase
NOM Nominative
1PP First person pronominal prefix

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