

Problem 1: Kannada Prefixation (p.32 in reader)

First take a look at lines 1-8 ('red ___').

Assume the underlying form of the prefix 'red' is /keN/ and N represents a generic nasal that does not have place of articulation specified – i.e. we know it is nasal and voiced, but we don't know if it is labial, dental, palatal, etc.

1. List all three surface (phonetic) forms of the prefix /keN/ 'red'.

Underlying Form: /keN/

Surface Forms: a. [ken] b. [kem] c. [keŋ]

2. List the surface (phonetic) forms of each root (noun with no prefix) in lines 1-8. Assume the form with no prefix to be the basic underlying form.

Sometimes historical sound changes leave odd vestiges in current morphological alternations. Just to make things more straightforward in this assignment change the pronunciation of 'tooth' to [pallu].

<u>Underlying Form</u>	<u>Surface Forms</u>	<u>Gloss</u>
/kaŋŋu/	[kaŋŋu] [gaŋŋu]	'eye'
/ta ir/	[ta ir] [da ir]	'sprout'
/pallu/	[pallu] [bal]	'tooth'
/kiraŋa/	[kiraŋa] [giraŋa]	'ray'
/tsiguru/	[tsiguru] [dziguru]	'sprout'
/tale/	[tale] [dale]	'head'
/nalige/	[nalige]	'tongue'
/muligu/	[muligu]	'sky'

3. Finish the assimilation rule for the prefix 'red'. Make your rules as general as possible.

/keN/ → [kem] / ___ bilabial consonant
→ [ken] / ___ alveolar consonant
→ [keŋ] / ___ velar consonant

Fill in the blanks in the following statement: *The underlying nasal in the prefix 'red' assimilates in voicing to the following consonant.*

What type of assimilation is this? Partial or complete? Regressive or progressive?

8. Write the assimilation rule for the initial consonants of the roots.

- /t/ → [d] / voiced consonant ___
/p/ → [b] / voiced consonant ___
/k/ → [g] / voiced consonant ___
/dz/ → [dz] / voiced consonant ___
/m/ → [m] / voiced consonant ___

Can you state all these rules in one general sentence similar to above?

The initial consonant of the root assimilates in voicing to the preceding consonant.

What type of assimilation is this? (Partial) or complete? Regressive or (progressive)?

9. Give the Kannada for 'red pig,' 'red bee,' 'big head,' and 'big sky'.

'red pig' is kembandi

/keN pandi/ → [kembandi]

The underlying nasal in the prefix becomes bilabial before a bilabial consonant.

The underlying /p/ in the root becomes voiced after a nasal.

'red bee' is kendzenu

/keN dzenu/ → [kendzenu]

The underlying nasal in the prefix becomes alveolar before an alveolar consonant.

'big head' is heddale

/heC tale/ → [heddale]

The underlying voiced stop in the prefix becomes an alveolar stop before an alveolar stop.

The underlying /t/ in the root becomes voiced after a voiced consonant.

'big sky' is hemmugilu

/heC mugilu/ → [hemmugilu]

The underlying voiced stop in the prefix becomes a bilabial nasal before a bilabial nasal.

Problem 2: Eastern Cheremis (p.34 in reader)

1. Describe the vowels in Eastern Cheremis in terms of height backness and rounding.

	<u>height</u>	<u>backness</u>	<u>rounding</u>
[i]	high	front	unround
[e]	mid	front	unround
[y]	high	front	round
[ø]	mid	front	round
[u]	high	back	round
[o]	mid	back	round
[a]	low	back	unround
[ə]	mid	central	unround

2. List the six surface (phonetic) forms of the suffix in (a)

- | | | |
|-------|-------|-------|
| a. ʃe | b. ʃo | c. ʃø |
| d. ʒe | d. ʒo | f. ʒø |

What do the forms have in common? How are they different? The suffix surface forms all consist of a palato-alveolar fricative and a mid vowel. The surface fricatives differ in voicing and the surface vowels differ in backness and rounding.

How do you explain the alternation between [ʃ] and [ʒ] in the suffix? What type of phonological process is this? [ʃ] occurs after a voiceless consonant; [ʒ] after a voiced sound. This is progressive voicing assimilation.

3. Which vowel features (i.e. height, backness, and/or rounding) change in the suffix vowel? The suffix vowel changes in backness and rounding.

4. Which vowel in the root causes (*conditions* or *triggers*) the suffix vowel to change? Hint: ə works differently than the other vowels. The closest preceding vowel that is not a schwa.

5. Describe the harmony process with examples in a couple sentences. The suffix vowel assimilates in backness and rounding to the preceding non-schwa vowel. If the conditioning vowel is a front unrounded vowel [i, e, a] the suffix vowel is the mid front unrounded vowel [e]; if the conditioning vowel is a front rounded vowel [y, ø] the suffix vowel is the mid front rounded vowel [ø]; if the conditioning vowel is a back rounded vowel [u, o] the suffix vowel is the mid back rounded vowel [o].

6. What are the suffix vowels in (vi)?

bokten-ʒe kornə-ʒo zor-ʒø

7. List the surface forms of the suffixes in (b) (there are three underlying suffixes). Describe the harmony process. Is it the same as in (a) or different? There are three underlying suffixes. The surface forms that we have are:

1. [ʃte] [ʃtø] [ʃto]
2. [ne] [nø]
3. [mo]

The harmony process is the same as in (a). The suffix vowel is a mid vowel that has the same backness and rounding as the preceding non-schwa vowel.

8. Why doesn't the suffix *-na* in (c) alternate? The harmony process in (a) and (b) involves mid vowels and [a] is a low vowel. Furthermore, if rounding and back harmony applied to the low vowel it would produce vowels that do not exist in Cheremis.