

Problem Set # 2

Name in IPA: _____

A. (10.5 points) What do the following sounds have in common? (Name as many features as you can and don't forget the *phonological* place of articulation groupings.) Also, characterize them using words (e.g. they are all voiced stops, they are all continuants, etc.). Don't worry about natural classes in the strictest sense (they can still be a natural class even if there are some sounds missing).

1. [θ ð x χ ç φ] _____

2. [u o ɔ ø y] _____

3. [ŋ m n N ɲ] _____

4. [ʃ l ʎ ʌ] _____

5. [ð ʒ s t ʈ z] _____

6. [u ɪ y i ʊ ʊ i] _____

7. [l ɔ̃ β ʒ z ʀ ʎ v] _____

B. (10.5 points) Using only the English sound inventory (phonemes only), give the IPA symbols for all sounds of the following natural classes.

1. voiced fricatives [_____]

2. voiced stops [_____]

3. front vowels [_____]

4. sonorant consonants [_____]
(can include glides)

5. voiceless plosives [_____]
(oral stops)

6. obstruents [_____]

7. coronal consonants [_____]
(consonants = [+consonantal])

C. Greek (9 points)

Remember the sounds [x], [k], [c], and [ç] in the following data. [x] represents a voiceless velar fricative, [ç] a voiceless palatal fricative and [c] a voiceless palatal stop.

- | | | | | | |
|----|---------|--------------------|-----|----------|----------------|
| 1. | [kano] | <i>do</i> | 10. | [çino] | <i>pour</i> |
| 2. | [kori] | <i>daughter</i> | 11. | [xrima] | <i>money</i> |
| 3. | [çeri] | <i>hand</i> | 12. | [kufeta] | <i>bonbons</i> |
| 4. | [oci] | <i>2.82 pounds</i> | 13. | [kali] | <i>charms</i> |
| 5. | [cino] | <i>move</i> | 14. | [xano] | <i>lose</i> |
| 6. | [xali] | <i>plight</i> | 15. | [çeli] | <i>eel</i> |
| 7. | [krima] | <i>shame</i> | 16. | [ceri] | <i>candle</i> |
| 8. | [xufta] | <i>handful</i> | 17. | [oçi] | <i>no</i> |
| 9. | [xori] | <i>dances</i> | | | |

If we assume that the velar consonants and the palatal consonants are allophones of 2 separate phonemes (the stops are part of 1 phoneme, the fricatives are part of the other phoneme), and we assume the analysis that the velars are the phoneme because they are in wider distribution (they occur before back vowels and [r])...

1.) (3 points) In 3 ways (in words, using IPA symbols, and in features), write the phonological rule(s) that describes the process changing the velars to the palatals in the above environments (remember where the palatals occur?). For this problem, you can assume that the palatals have the same feature structure as fronted velars as depicted in Table 4.5, p. 88 of our text.

2.) (2 points) How does the rule in features better illustrate the assimilation process (better than words and better than using IPA symbols)? Basically, what do features do for us that the others don't?

3.) (4 points) Also using features, write a rule(s) for the alternative analysis (that the palatals are the phonemes). Discuss why this rule(s) is a less elegant choice based on where the velars occur.