

Directions: Write your name on your bluebook. Answer the following questions in it. Follow time indications. Use the attached feature matrices (p. 3) for reference. Hand in all papers when you have finished.

1. Identify the feature or features necessary to MINIMALLY specify the following segments or groups of segments with respect to the matrices on page 3. 10 minutes.

a. /ɲ/ and /ʁ/ b. /f/, /s/, /ç/ c. /o/, /u/, /w/

2. In plain English, what do the following rules do? Be as SPECIFIC as possible. Consult the attached matrices. 10 minutes.

a. $\begin{bmatrix} - \text{sonorant} \\ + \text{voice} \end{bmatrix} \rightarrow [+ \text{continuant}] / [+ \text{syllabic}] \text{-----}$

b. $[- \text{sonorant}] \rightarrow [- \text{back}] / \text{-----} \begin{bmatrix} + \text{syllabic} \\ - \text{back} \end{bmatrix}$ (NB: specify exactly what is changed by this rule.)

3. Using the attached matrices, write the following rules in distinctive features. 15 minutes.

- a. Unstressed vowels are non-tense.
 b. Obstruents are voiced before voiced obstruents and voiceless before voiceless obstruents.
 c. Vowels are nasal before nasal consonants followed by a consonant or word boundary.

4. Turkish. Answer the following questions based on the phonetic data that follows. All words listed have different meanings. [j] denotes a voiced palatoalveolar affricate. 20 minutes.

- a. In Turkish, velar [k] and [g] are in complementary distribution with palatal [c] and [j], respectively. State informally their relative distributions.
 b. Which in each pair would you choose to represent the phoneme and why?
 c. Write an informal rule (i.e., NOT in features) to account for the allophonic variants of the phonemes.

- | | | | |
|---------------|--------------|-------------|---------------|
| 1. kılıbık | 11. cürec | 21. gam | 31. jözlüc |
| 2. çojuk | 12. ercen | 22. tugay | 32. jüzel |
| 3. kavun | 13. çüncü | 23. bulgar | 33. jzmeç |
| 4. bakan | 14. çiçec | 24. duygu | 34. jün |
| 5. kibris | 15. cim | 25. gargara | 35. jöstermec |
| 6. yoksa | 16. cöpec | 26. kangal | 36. hanji |
| 7. koja | 17. teclif | 27. piyango | 37. jerjyef |
| 8. koku | 18. ascerlic | 28. sargı | 38. sevjili |
| 9. muvafak | 19. icinji | 29. yorgun | 39. çinjene |
| 10. dokuzunju | 20. cömür | 30. manga | 40. jec |

5. Canadian French. There are six parts to this question. Answer them all. 20 minutes.

In Canadian French [i] and [ɪ] are allophones of one phoneme. Assume that the phonetic examples in the data set below exhaustively illustrate the range of their occurrence. All of the examples represent different words.

- State their relative distribution. Hint: consider word/syllable structure.
- Select one of them as the phoneme; justify your choice.
- Write an informal rule (i.e., NOT in features) to predict the other.
- Write the rule formally.
- Do any other vowels appear to behave in the same way? If so, explain.
- Consider [midzi]. How would you explain the apparent occurrence of [i] in the first syllable before two consonants?

1. abɪm	11. liɲ	21. spɔrtsɪf	31. ʃɪfre
2. avi	12. pɪp	22. ekɪp	32. bisɪklɛt
3. katɔlɪk	13. plozɪb	23. mɛrsi	33. sinema
4. ʃɪk	14. vɪt	24. fiɪ	34. sivɪl
5. vɪd	15. reʒɪm	25. admire	35. dzizɛn
6. enɛrʒi	16. rɪʃ	26. bizɔ	36. dzɪstɑ
7. frɑsɪn	17. dzi	27. simɑ	37. biʒu
8. kɔpri	18. si	28. site	38. vide
9. vi	19. ʒɪg	29. dzɪktafɔn	39. ivɛr
10. li	20. lɪs	30. sɪfle	40. filɪp

Castilian Spanish

	Obstruents											Resonants								
												Nasals			Liquids				Glides	
	p	b	f	θ	t	d	s	ç	k	g	x	m	n	ɲ	l	ʎ	ř	ĩ	y	w
Syllabic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	
Sonorant	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	
Coronal	-	-	-	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	-	
Anterior	+	+	+	+	+	+	-	-	-	-	+	+	-	+	-	+	+	-	-	
Labial	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	
High	-	-	-	-	-	-	-	+	+	+	-	-	+	-	+	-	-	+	+	
Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Back	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	+	
Continuant	-	-	+	+	-	-	+	-	-	+	-	-	-	-	-	+	+	+	+	
Lateral	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	
Strident	-	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	
Nasal	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	
Voiced	-	+	-	-	-	+	-	-	+	-	+	+	+	+	+	+	+	+	+	
Tense (long)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	

	Vowels				
	i	e	a	o	u
High	+	-	-	-	+
Low	-	-	+	-	-
Back	-	-	+	+	+
Labial	-	-	-	+	+
Tense	+	+	-	+	+