

Problem 1

Which segment is **NOT**:

EXAMPLE:	[+labial]	p	v	<u>k</u>	m	b
1	[+syllabic]	u	l	i	<u>r</u>	ə
2	[-consonantal]	a	j	<u>l</u>	o	w
3	[-sonorant]	h	p	ʒ	<u>w</u>	ʔ
4	[-continuant]	d	<u>z</u>	n	ʔ	c
5	[+delayed release]	<u>k</u>	dz	dʒ	tʃ	ts
6	[+strident]	z	<u>θ</u>	χ	tʃ	v
7	[+anterior]	t	l	<u>dʒ</u>	n	s
8	[-coronal]	m	pf	v	g	<u>t</u>
9	[+high]	i	<u>e</u>	j	w	u
10	[-low]	j	u	<u>æ</u>	i	ʌ
11	[+round]	u	ø	<u>ɪ</u>	y	w
12	[+back]	u	ʊ	ʌ	<u>y</u>	o

Problem 2

What distinctive feature differentiates the sounds in each pair? State which member of the pair has the + value.

EXAMPLE: p b; b is [+voiced]

- 1 i ə i is [+high]
- 2 a ɔ a is [+low] *and/or* ɔ is [+round]
- 3 u y u is [+back]
- 4 i y y is [+round]
- 5 i ɪ i is [+tense]
- 6 ð z z is [+strident] *and/or* ð is [+distributed]
- 7 l r l is [+lateral]
- 8 h ʔ h is [+continuant]
- 9 p t p is [+labial] *and/or* t is [+coronal]
- 10 s ʃ s is [+anterior]
- 11 u w u is [+syllabic]
- 12 v β v is [+strident]

Problem 3

All sounds in (a) are	[+syl, -cons]
i ü (= IPA y) ʉ u	[+high]
i ü (= IPA y)	[+high, -back]
o ɔ	[-high, (-low), +back, +round]
ʌ a (= IPA ɑ)	[-high, +back, -round]
e ɛ	[-high, -low, -round]

All sounds in (b) are	[-syl]
p t k	[-son, -cont, (-d.r.), -vd]
p t	[-son, -cont, (-d.r.), -vd, -dors]
p b m	[-cont, +lab]
k g x ŋ	[+dors, +back]
θ s	[-son, +cont, (+cor), +ant, -vd]
n l r	[+son, +cor]

Problem 4

Translate the following descriptions of phonological variation into rules with distinctive features.

EXAMPLE: Voiceless obstruents become voiced after a nasal.

[-sonorant, -voiced] → [+voiced] / [+nasal] ____

- Voiced obstruents become voiceless at the end of a word.
[-son, +voiced] → [-voiced] / ____ #
- Voiced stops become voiced fricatives between vowels.
[-son, -cont, -d.r., +voiced] → [+cont] / V ____ V
- Alveolar consonants become dental before θ.
[+cons, (+cor), +ant, -dist] → [+dist] / ____ θ
- Alveolar fricatives become palato-alveolar before front vowels.
[-son, +cont, (+cor), +ant, -dist] → [-ant, +dist] / ____ [-syl, -cons, -back]
- Back vowels become front preceding a syllable with a front vowel.
[-syl, -cons, +back] → [-back] / ____ C₀ [-syl, -cons, -back]

C₀ means “zero or more consonants”, that is zero or more consonants can come between the two vowels. We will cover these types of shortcuts later; you don’t need them for the quiz.