

Problem 1

Which segment is **NOT**:

EXAMPLE:	[+labial]	p	v	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">k</span>	m	b
1	[+syllabic]	u	l	i	r	ə
2	[-consonantal]	a	j	l	o	w
3	[-sonorant]	h	p	ʒ	w	ʔ
4	[-continuant]	d	z	n	ʔ	c
5	[+delayed release]	k	dz	dʒ	tʃ	ts
6	[+strident]	z	θ	ʒ	tʃ	v
7	[+anterior]	t	l	dʒ	n	s
8	[-coronal]	m	pf	v	g	t
9	[+high]	i	e	j	w	u
10	[-low]	j	u	æ	i	ʌ
11	[+round]	u	ø	ɪ	y	w
12	[+back]	u	ʊ	ʌ	y	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
2	a	ɔ
3	u	y
4	i	y
5	i	ɪ
6	ð	z
7	l	r
8	h	ʔ
9	p	t
10	s	ʃ
11	u	w
12	v	β

### Problem 3

### 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] \_\_\_\_

- a. Voiced obstruents become voiceless at the end of a word.
- b. Voiced stops become voiced fricatives between vowels.
- c. Alveolar consonants become dental before  $\theta$ .
- d. Alveolar fricatives become palato-alveolar before front vowels.
- e. Back vowels become front preceding a syllable with a front vowel.