

# Phonology Exercises

## Minimal pairs

1. Find minimal pairs to illustrate the phonemic status in English of the following phonemes:

1. /u/ and /ʊ/	<b>pool / pull</b>	2. /r/ and /l/	<b>fry / fly</b>
3. /s/ and /θ/	<b>sink / think</b>	4. /f/ and /v/	<b>fat / vat</b>
5. /t/ and /d/	<b>try / dry</b>	6. /əʊ/ or /oʊ/ and /aʊ/	<b>roadie / rowdy</b>
7. /p/ and /f/	<b>pale / fail</b>	8. /æ/ and /eɪ/	<b>pal / pale or fat / fate</b>
9. /ɛ/ and /æ/	<b>bed / bad</b>	10. /ʌ/ and /ɒ/	<b>buddy / body</b>

2. In the following list of words, how many phonemes can you identify with the help of minimal pairs? (Transcribe them first!)

1. beak	<b>bik</b>	2. beg	<b>bɛg</b>	3. big	<b>big</b>	4. black	<b>blæk</b>
5. back	<b>bæk</b>	6. bag	<b>bæg</b>	7. block	<b>blɒk</b>	8. blot	<b>blɒt</b>
9. bog	<b>bɒg</b>	10. bug	<b>bʌg</b>	11. diss	<b>dɪs</b>	12. mitt	<b>mɪt</b>
13. knit	<b>nɪt</b>	14. peek	<b>pik</b>	15. Pete	<b>pit</b>	16. pig	<b>pɪg</b>
17. place	<b>pleɪs</b>	18. plaque	<b>plæk</b>	19. plate	<b>pleɪt</b>	20. play	<b>pleɪ</b>
21. plot	<b>plɒt</b>	22. pratt	<b>præt</b>	23. pray	<b>preɪ</b>	24. sit	<b>sɪt</b>
25. thin	<b>θɪn</b>	26. thing	<b>θɪŋ</b>	27. this	<b>ðɪs</b>	28. zit	<b>zɪt</b>

Phonemes:

<b>1+5</b>	/i/ /æ/	<b>12+13+24+28</b>	/m/ /n/ /p/ /s/ /z/
<b>2+3+4+6+7+9+10</b>	/ɛ/ /ɪ/ /æ/ /ɒ/ /ʌ/	<b>17+19</b>	/s/ /t/
<b>19+21</b>	/eɪ/ /ɒ/	<b>11+27</b>	/d/ /ð/
<b>3+16</b>	/b/ /p/	<b>20+23</b>	/r/ /l/
<b>5+6</b>	/k/ /g/	<b>25+26</b>	/n/ /ŋ/
<b>7+8 / 14+15</b>	/k/ /t/		

## Allophones in complementary distribution

1. What are the distribution rules for the allophones in the following examples?

There are differences in pronunciation for the diphthong /aɪ/ in some English dialects as the following list shows.

b <sup>Λ</sup> aɪt	fai <sup>Λ</sup>	fai <sup>Λ</sup> ɪŋ	b <sup>Λ</sup> aɪk	baɪ <sup>Λ</sup>
naɪmθ	ɹaɪd	ɹaɪz	l <sup>Λ</sup> aɪf	f <sup>Λ</sup> aɪt
taɪ	tai <sup>Λ</sup> m	t <sup>Λ</sup> aɪp	ɹaɪt	ɹaɪs

Formulate the phonological rule that determines which pronunciation is used.

**aɪ if followed by a voiced consonant or syllable-final (no coda)**

**Λɪ if followed by an unvoiced consonant**

### Complementary distribution

2. Look at the transcriptions of a number of words in Scots.

a) Match the orthographic English gloss in the box below with the Scots transcription. (Hint: diphthongs in RP are usually lengthened monophthongs in Scots)

Scots transcription	English orthographic gloss	Scots transcription	English orthographic gloss
ma'e	<b>why</b>	ɹɪp	<b>whip</b>
əwe:	<b>away</b>	wɪtʃɪz	<b>witches</b>
ɹaɪʃ	<b>which</b>	wɛðɹvɛ:n	<b>weathervane</b>
meɪ	<b>whale</b>	əɹaɪt	<b>awhile</b>
we:	<b>way</b>	ɹaɪt	<b>white</b>
wɛðɹ	<b>whether</b>	wɛ:t	<b>wait</b>
wɛ:	<b>whew</b>	wɔnt	<b>want</b>
wɛɪz	<b>Wales</b>		

away, awhile, wait, Wales, want, way, weathervane, whale, whether, whew, which, whip, white, ~~why~~, witches

b) Do you think the sounds [w] and [ɹ] (voiceless labial velar approximant, a kind of mixture between /w/ and /h/) are phonemes, allophones or in free variation? Give reasons. (If you think they are allophones, give the archiphoneme.)

**Phonemes: there are minimal pairs:**

**whew and way,  
weather and whether,  
whales and Wales**

## Phonology of fluent speech

1. Complete the following table and describe the phenomenon present.

orthographic script	careful speech	fluent speech	phenomenon
<b>Mix and match</b>	mɪks ənd mətʃ	mɪks n mətʃ mɪks m mətʃ	<b>elision</b> <b>coalescence</b>
got back	gɒt bæk	<b>gɒp bæk</b>	<b>coalescence</b>
Pamela Anderson	<b>'pæmələ 'ændəsən</b>	'pæmələɪ 'ændəsən	<b>linking (intrusive /r/)</b> <b>elision in last syllable</b>
<b>understandable</b>	ʌndə'stændəbəl	ʌndə'stændəbəl	<b>elision</b>
Zicken (German)	<b>'tsɪkən</b>	'tsɪkŋ	<b>elision and progressive assimilation</b>
<b>blow it</b>	bləʊ ɪt	bləʊ <sup>w</sup> ɪt	<b>liason / linking</b>
ungainly	ʌn'geɪnlɪ	<b>ʌŋ'geɪnlɪ</b>	<b>regressive assimilation</b>

2. **Advanced:** In the words for kitchen [kɛɡɪn], cottage [bʊθɪn], house [ti:], village [pɛntre], valley [dəfrɪn] and Wales [kəmri:] the word-initial sounds change when they occur in connection with the word [ən] meaning “my”. With the following table,

- give the English translations,
- describe the phonological changes that have occurred.
- formulate a general rule for these changes.

English meaning	Welsh transcription	phonological changes: <b>coalescence</b>
<b>my house</b>	ən ni:	<b>n + alveolar plosive [ti:]</b>
<b>my valley</b>	ən nəfrɪn	<b>n + alveolar plosive [dəfrɪn]</b>
<b>my cottage</b>	əm muθɪn	<b>m + bilabial plosive [bʊθɪn]</b>
<b>my village</b>	əm məntre	<b>m + bilabial plosive [pɛntre]</b>
<b>my kitchen</b>	ən ɲɛɡɪn	<b>ɲ + velar plosive [kɛɡɪn]</b>
<b>my Wales</b>	ən ɲəmri	<b>ɲ + veolar plosive [kəmri]</b>

Rule: **Word-initial plosive coalesces with final nasal of possessive determiner, but retains place of articulation**

3. In Dutch we sometimes have schwa epenthesis (the insertion of an optional schwa). In the table you can see where this is possible and where it is not (marked by \*).

- Complete the table in analogy of the data given.
- Identify the conditioning environment for Schwa epenthesis in these examples

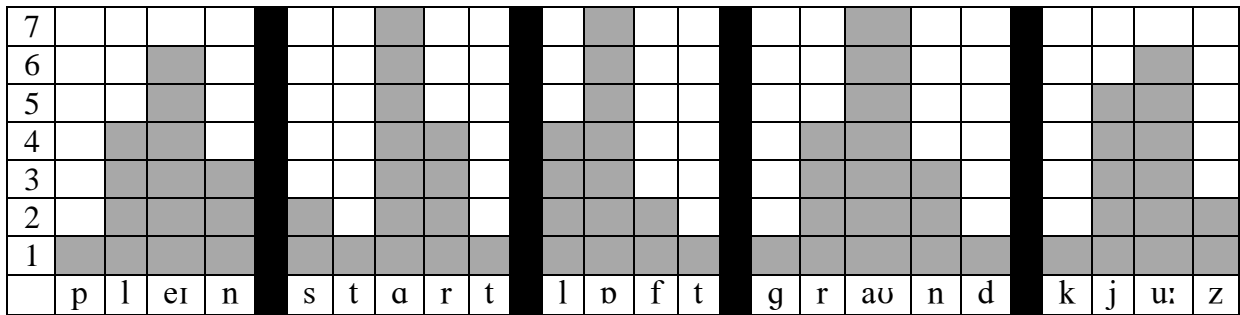
ɛlk	→	ɛlək	“each”	→	ɛl'kar	*ɛləkar	“each other”
vɔlk		vɔlək	“people”		'vɔlkən	*vɔləkən	“peoples”
warm		warəm	“warm”		'warmən	*warəmən	“to warm”
hɔrn		hɔrən	“horn”		'hɔrnətjə	*'hɔrənətjə	“little horn”
bɛlx		bɛləx	“Belgian”		'bɛlyjə	*bɛləyjə	“Belgium”
arm		<b>arəm</b>	“Arm”		<b>armən</b>	<b>*arəmən</b>	“arms”

mɛlk	<b>mɛlək</b>	“milk”	<b>mɛlkən</b>	<b>*mɛlkənən</b>	“to milk”
kɔrn	<b>kɔrən</b>	“corn”	<b>kɔrnən</b>	<b>*kɔrənən</b>	“corns”

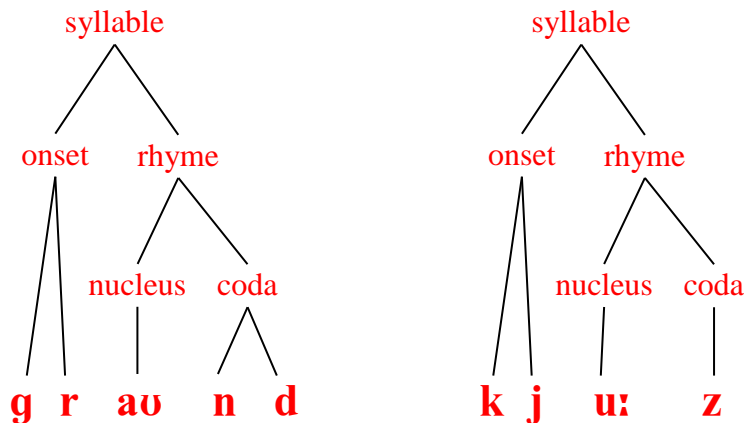
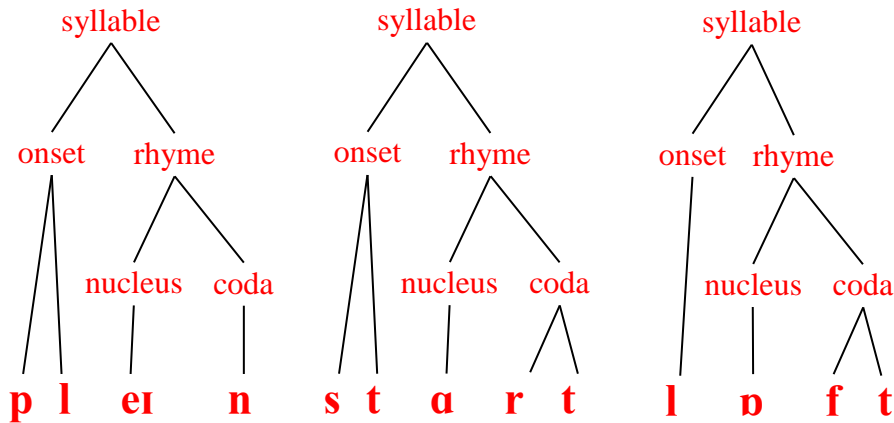
b) **Schwa after a sonorant (approximant) when it is followed by a vowel at the end of a word; no epenthesis if the sonorant/consoant cluster is followed by a vowel.**

### Sonority and Syllable Structures

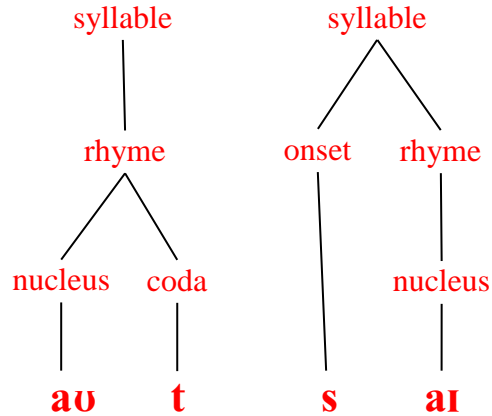
1. Fill in the sonority levels for the following words: plane, start, loft, ground, queues.  
(Transcribe them phonemically first in the bottom row.)



2. Draw syllable trees  
a) for the same words:



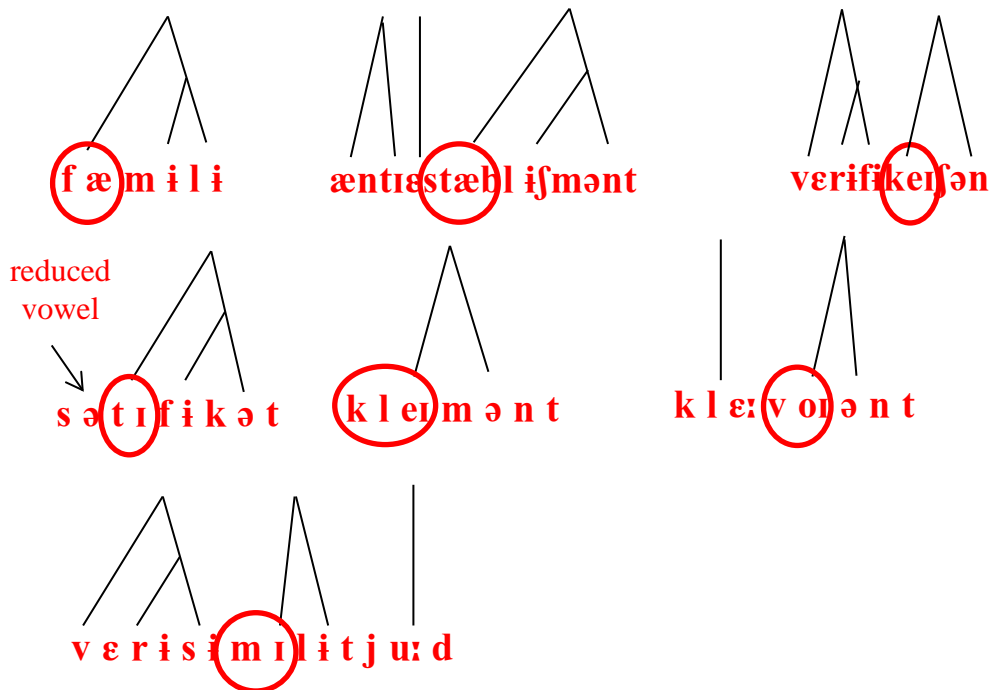
- b) for a syllable without a coda
- c) for a syllable without an onset.



## Feet

Split the following words up into feet and explain where you would place the word stress. **Hint:** transcribe the words first and check in a good dictionary that your transcripts are correct.

family, anti-establishment, verification, certificate, claimant, clairvoyant, verisimilitude.



## Intonation

1. Identify where the stress would be in the following utterances. Be careful, it is not the whole word that would be stressed...

- A: I am looking for my **glasses**?
- B: Which glasses have you lost **this** time?
- A: My **reading** glasses.
- B: They're on the **book**shelf.
- A: The bookshelves in **which** room?
- B: The ones in the **living** room.

2. Indicate where in the following utterances the voice would go up (↗) where it would remain on the same level (→) or where it would go down (↘).

A: Did you do anything interesting last weekend? ↗

B: I went to see my brother in London →, had a great evening out with him in the theatre →, went of a ride on the London Eye on Sunday → and had a fabulous meal at and Indian Restaurant before driving back. ↘

A: I'm glad for you. ↘