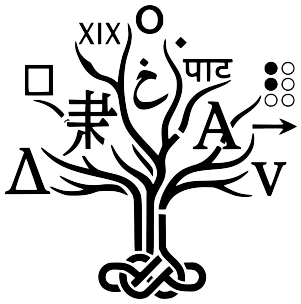
Qualification Round

2026 Edition



Problem A: English accents (5 Points)

Most of the world's writing systems do not have a one-to-one mapping between sounds and symbols. Moreover, writing systems are different around the world, and the same symbol can correspond to different sounds in different languages. For these reasons, linguists use the **International Phonetic Alphabet** (IPA) to represent sounds. The IPA is consistent and universal, with one-to-one mapping between sounds and symbols.

Your task: In this problem set you will use the IPA to transcribe audio recordings. Listed below are ten English words with audio recordings from two speakers. Listen to the recordings. Use our IPA chart webpage for your transcription.

Example: 'night' = /n/, /t/

Now listen to the audio files linked in 1–10.

Speaker 1:

1. Audio 001 – 'shoulder'
2. Audio 002 – 'hexagon'
3. Audio 003 – 'football'
4. Audio 004 – 'church'
5. Audio 005 – 'rambling'

Speaker 2:

6. Audio 006 – 'shoulder'
7. Audio 007 – 'hexagon'
8. Audio 008 – 'football'
9. Audio 009 – 'church'
10. Audio 010 – 'rambling'

Questions:

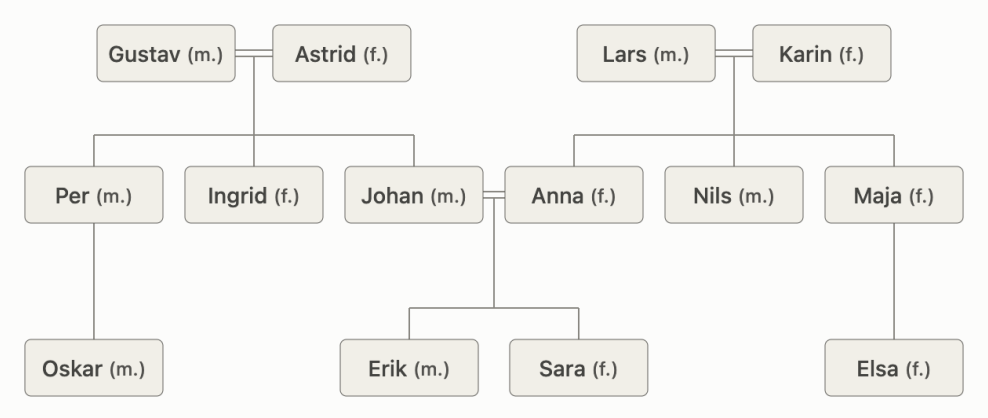
(a) For each speaker, list all the consonants you hear in each word. Use IPA symbols to write your answers.

(b) Describe two differences between the two English accents you have heard.

Problem B: Swedish kinship terms (5 Points)

Kinship terms are words describing family relations. Languages make different levels and types of distinctions. For example, English has one word *uncle* for both your father's brother and your mother's brother, while Punjabi has a separate word for each, *chacha* and *mama*. Some languages build kinship terms out of smaller parts – for example, English adds *grand* to go up one generation, as in *grandfather* and *grandmother*.

Your task: In this problem set, you will look at how kinship terms are built in Swedish. Below is a family tree, followed by 10 sentences describing some of the relationships using Swedish kinship terms.



1. Anna is Sara's *mor*.
2. Erik is Sara's *bror*.
3. Astrid is Erik's *farmor*.
4. Lars is Sara's *morfar*.
5. Nils is Erik's *morbror*.
6. Ingrid is Sara's *faster*.
7. Maja is Erik's *moster*.
8. Erik is Nils's *systerson*.
9. Sara is Maja's *systerdotter*.
10. Erik is Gustav's *sonson*.

Questions:

(a) How are compound kinship terms built in Swedish? Use examples to illustrate.

(b) Fill in the blanks with the correct Swedish word.

(i) Sara is Astrid’s _____.

(ii) Oskar is Ingrid’s _____.

(iii) Johan is Oskar’s _____.

(iv) Karin is Sara’s _____.

(v) Sigrid is Gustav’s *mor* and Erik’s _____.

(c) Two of the words given in sentences 1–10 do not follow the pattern.

(i) Which two words are they?

(ii) What would they be if they followed the pattern?

(iii) Why do you think they are different?

(d) Compare the way gender is encoded into kinship terms for your parents’ parents and your parents’ siblings in English and Swedish. Give at least one similarity and one difference.

Problem C: Bootstrapping English non-words (5 Points)

Non-words or nonsense words are made-up words which are plausible words in a given language but simply do not exist. For example, the word *wug* is an English non-word which sounds like it could be a real word but simply is not. Non-words follow all the phonotactic and grammatical rules of the given language, which is what makes them believable.

Your task: In this problem set, you will identify strategies for classifying English non-words into grammatical categories (verb, adjective, noun). Below is a paragraph from *The Little Mermaid*. Some of the verbs, adjectives and nouns have been replaced with non-words.

> The rif had just set as she migged her head above the waves; but the clomps were tinted with crimson and gold, and through the gluntering twilight beamed the evening star in all its beauty. The sea was crall, and the air mild and fresh. A large twiglop, with three gruds, lay woply on the water, with only one sail set; for not a breeze stirred, and the sailors sat idle on deck or amongst the rigging. There was loofla and song on board; and, as darkness came on, a hundred gurn lanterns were lighted, as if the flags of all nations waved in the air. The little mermaid swam close to the cabin windows; and now and then, as the waves lifted her up, she could opple through clear drife window-panes, and see a number of well-dressed people within.
>
> (*The Little Mermaid* by Hans Christian Andersen, http://hca.gilead.org.il/li_merma.html)

Questions:

(a) How might a person identify that a word is a verb? Give two reasons.

(b) How might a person identify that a word is an adjective? Give two reasons.

(c) How might a person identify that a word is a noun? Give four reasons.

Problem D: Secret language game (5 Points)

Secret language games are popular around the world. Some include Pig Latin (English), Löffelsprache (German), Fay ki Boli (Urdu) and Nói lái (Vietnamese).

Your task: In this problem set, you will play a language game with English and identify the game's rules. There are two rules which apply phonetically (i.e. based on how words sound, not their spelling) and in a fixed order. Below is a paragraph written in the secret language.

> *Ethi ratiicffi ightsli erewi alostmi edri. Oti topsi or otni oti topsi, atthi is ethi uesqiionti. Eshi ediicieddi tosiingppi aswi ethi estbi ingthi oti odi. Ethi arsci oomedzi astpi as eshi aiwiedti imapiienttiyli.*

Questions:

(a) Translate the paragraph above into plain English.

(b) What are the two rules of this game and what order do they apply in?

(c) Translate the words below into the secret language. For each word, explain how the rules apply.

  (i) *plight*

  (ii) *unnamed*

  (iii) *child*

  (iv) *disagree*

(d) Do you think the following words would be treated similarly by the rules of this game?
hour, honest, heir, hotel, history, hair

Problem E: Quantifiers and set theory (5 Points)

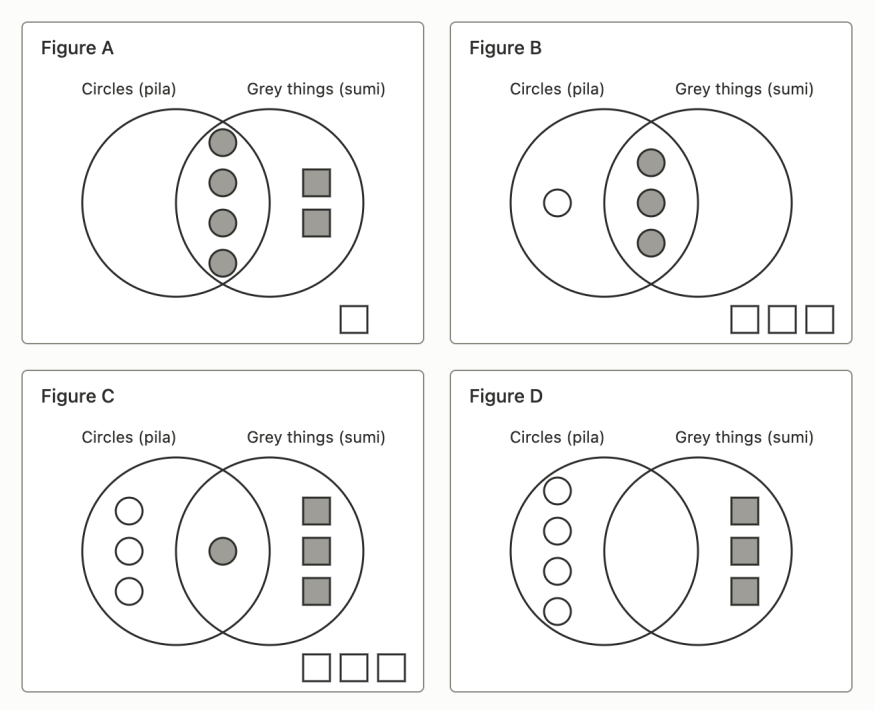
Every language has words like *every*, *some*, *no* and *most*. These words are known as **quantifiers** and allow us to talk about quantities without using numerals. Linguists have found that quantifiers behave in surprisingly similar ways across the world's languages.

Your task: In this problem set, you will work out the meanings of four quantifiers in Pelani, a made-up language. Here are some useful Pelani words:

pila = 'circles' *kova* = 'squares' *sumi* = 'grey'

Example Pelani sentence: *pila sumi* = 'Circles are grey.'

Figures A–D show Venn diagrams. Venn diagrams show how things are sorted into groups called sets. Each set is drawn as a large ring, and every element inside that ring belongs to that set. In the figures below, the left set contains all circles, and the right set contains everything that is grey. The overlapping area contains elements in both sets, in this case, grey circles. Elements that belong to neither set are shown outside both rings, in this case, white squares.



Here are some sentences in Pelani. Next to each sentence are the figures in which it is true.

1. *Mu pila sumi.* – A, B, C
2. *Tal pila sumi.* – A
3. *Sor pila sumi.* – A, B
4. *Nu pila sumi.* – D

5. *Mu kova sumi.* – A, C, D
6. *Tal kova sumi.* – D
7. *Sor kova sumi.* – A, D
8. *Nu kova sumi.* – B

Questions:

(a) What do *tal*, *mu*, *nu* and *sor* mean?

(b) One hypothesis states that *sor* means “at least three”. Use the data to show why this hypothesis is wrong.

(c) To verify true/false judgements, some quantifiers only require checking if parts of a Venn diagram are empty or not empty. Others require counting the number of elements in parts of the diagram and making evaluations.

(i) Which quantifiers require checking parts of a Venn diagram to make a true/false judgement? For each quantifier in sentence (1) to (4), state which part of the diagram must be checked using the Venn diagram labels in Figure E below.

(ii) Which quantifiers require counting to make a true/false judgement? For each quantifier in sentence (1) to (4), state which parts of the diagram must be counted to make an evaluation using the Venn diagram labels in Figure E below.

