

Australian Computational and Linguistics Olympiad Problem:

Kannada

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Kannada is one of the major languages of India, spoken by more than 25 million people primarily in the South of the country, near Bangalore. It is a very old language and it uses its own writing system. For the purpose of this puzzle, the Kannada letters are transcribed using the Roman alphabet. The letters L, D, T, and N represent a special pronunciation with the tongue curled upward.

Hint: There is no translation for "the" in Kannada:

mane	'house'	manege	'to (the) house'
peeTe	'market'	peeTege	'to (the) market'
tande	'dad'	tandege	'to dad'
roTTi	'flat bread'	roTTige	'to (the) flat bread'
chaTNi	'chutney (a relish)'	chaTNige	'to (the) chutney'
hakki	'bird'	hakkige	'to (the) bird'
taayi	'mother'	taayige	'to mother'
jooLa	'corn'	jooLakke	'to (the) corn'
pustaka	'book'	pustakakke	'to (the) book'
simha	'lion'	simhakke	'to (the) lion'
kalkatta	'Calcutta'	kalkattakke	'to Calcutta'
manushya	'man'	manushyanige	'to (the) man'
amma	'mom'	ammanige	'to mom'
huDuga	'boy'	huDuganige	'to (the) boy'
sneehita	'friend'	sneehitanige	'to (the) friend'

(a) Which parts of the words in the second column correspond to the English word 'to'?

_____ Last parts: 'ge', 'kke' or 'nige' _____

(b) Now, here are some new words in Kannada:

hamsa	'swan'
akka	'older sister'
tangi	'younger sister'

How would you say: 'to (the) swan' _____ hamsakke _____

'to (the) older sister' _____ akkanige _____

'to (the) younger sister' _____ tangige _____

In this language, the way to express the meaning 'to' is to add one of three endings to a word: 'ge', 'kke' and 'nige'. Which ending is used is determined by two factors, what the final sound of the word is, and, if the word ends in /a/, by whether the word denotes a human or not.

So, if a word has:

Final 'e' and final 'i' → 'ge'

Final 'a' + non-human → 'kke'

Final 'a' + human → 'nige'

Note that 'nige' could be made up of 'ni' and 'ge', since 'ge' would be the right form for a word ending in 'ni'. But we don't have other evidence for proposing a meaning for 'ni'.