Question 45: Finished with Finnish Solution

(a)	kylpy	(b) kaappi	(c) kaapin
(d)	metsän	(e) vaatteessa	(f) äiti
(g)	tarve	(h) rotassa	(i) kepissä
(j)	älykkö	(k) Turussa	

Finnish nouns are affected by two processes that depend on the word's phonological structure: vowel harmony and consonant gradation.

Vowel harmony: all the vowels in a word 'harmonize' in the sense that they must all be compatible,

according to the following classification:

- front vowels: ä, ö, y (e, i)
- back vowels: a, o, u (e, i)

The rule is that all the vowels must match for frontness, bearing in mind that e and i are 'neutral' so they are compatible with either front or back vowels. (But if all the vowels in the stem of the word are neutral, then they count as front rather than back.)

For this problem, the main effect of vowel harmony is in the inessive forms, where the suffix has two forms, -ssa or $-ss\ddot{a}$, to be chosen according to the vowels in the stem. But because of the neutral vowels, the suffix's vowel does not depend, as you might expect, on the nearest preceding vowel, but on the overall classification of the stem as front or back.

Consonant gradation: consonants have two 'grades', called 'strong' and 'weak'. The total system is complex, but this problem simplifies it by focusing on the two patterns shown in the table:

strong	<u>weak</u>
pp, tt, kk	p, t, k
p, t, k	v, d, 0 (i.e. nothing)

Consonant gradation affects the last consonant of the stem when certain suffixes are added, even though this consonant is separated from the suffix by the stem's final vowel. (Again, this is unexpected since phonological changes are generally triggered by the immediately preceding or following sound.)

In general, the inessive and genitive suffixes trigger a weakening of the stem's consonant; e.g. *bitti* becomes *bitissä*. But there is an important complication: stems ending in —e reverse the process, with a strong grade in the basic stem and a weak one before the suffix! You see this irregularity in three words: *vaate*, *lääke* and *tarve*.