

UKLO Round 1 2012

2. Danish numbers (5 marks)

Here are some examples of Danish numbers:

3 = tre
 4 = fire
 5 = fem
 6 = seks
 7 = syv
 20 = tyve
 30 = tredive
 40 = fyrré
 57 = syvoghalvtreds
 60 = tres
 78 = otteoghalvfjérds
 80 = firs

Question 2. (Write your answers on the separate answer sheet.)

Express the following Danish numbers in figures:

- a. treogtyve
- b. seksoghalvtreds
- c. fireogtres
- d. femoghalvfjérds
- e. syvoghalvfems

What is the Danish for these figures:

- f. 8
- g. 27
- h. 36
- i. 65
- j. 98

Q2. Danish numbers (5 marks)

a.	b.	c.	d.	e.
f.	g.	h.	i.	j.

SOLUTION

How to mark an UKLO script

Terminology

- **target:** the correct answer; e.g. ‘A B C d’ (where X, Y and Z are wrong)
- **script answer:** the answer in the script you’re marking; e.g. ‘A X C D’.
- **point:** a number that you assign, which the spreadsheet eventually translates into a ‘mark’; e.g. 1 for A
- **unit:** a part of the target that carries a point; e.g. A, X and C. Typically a unit is a word, a phrase or a word-part.
- **sign:** a ‘mark’ that you make on each unit in the script.
 - **tick:** on a completely right unit; e.g. on A and C
 - **cross:** on a completely wrong unit; e.g. on X
 - **half:** on a partly right unit; e.g. on D (for d)

Example:

			$\frac{1}{2}$
A	X	C	d

- **score:** the number you assign to the entire script, following the directions in the marking scheme.

Principles

- Each correct unit or partly right unit in the script answer increases the score.
- Completely wrong units in the script answer are penalised simply by not increasing the score.
 - e.g. A X C d scores 3 because X scores 0.
- Similarly, units in the target that are missing from the script answer are penalised simply by not increasing the score.
 - e.g. A C d scores 3 because only A, C and d score anything.
- But if the script answer contains more units than the target, the surplus units should be penalised.
 - e.g. A B C d X scores 3 because X scores -1, though A B C d score 4.
- No score should be worse than a completely blank answer, so there are no negative scores.
 - e.g. A B C d X Y Z Z Z scores 0, because although each X, Y and Z reduces the score by 1, the effect stops when the score reaches 0.

How to score

1. Follow the marking sheet for
 - a. recognising units
 - b. assigning ticks and halves
 - c. assigning points for ticks and halves.

2. Count the units in the script answer and compare this number with the number of units in the target. If the script answer contains more units than the target, go to 4. Otherwise (i.e. in the vast majority of cases) go to 3.
 3. Add up all the points for ticks and halves. That's the score.
 4. As in 3, but then deduct the number of surplus units, i.e. the difference between the numbers of units in the script answer and in the target.
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Q2. Danish numbers (5 marks, 10 points)

a. 23	b. 56	c. 64	d. 75	e. 97	
f. otte	g. syvogtyve	h. seksogtredive	i. femogtres	j. otteoghalvfems	1

Comments:

Comments on Danish

This is slightly tricky because some Danish numbers are based not on ten (as in English) but on scores (a score is 20), as in English ‘three score and ten’, and of these numbers, some count ten (*halv* = half a score) back from the next (rather like the German time system, where *halb sechs* literally means ‘half six’ but actually means ‘half past five’). Once you’ve grasped this general point about the system, everything is straightforward:

- *og* means ‘and’,
- the individual numbers are more or less obvious
- but the ‘scores’ numbers have two forms, for use with and without *halv*; for example, 80 is *firs* but in 78, *firs* is replaced by *fjérds*.

Notice a trick often used in the Olympiad: the first question contains Danish data that you need in order to answer the second question. (Moral: use every scrap of information we give you!) In Q1, *fireogtres* tells you that *tres* doesn’t change to *treds* when combined with a following number, but just after *halv*.