

# AILO 2017 Training sample set #2

## (A) Big dog, old bull, strong horse

### A1.

a. <i>en tyr</i>	a bull
b. <i>en gammal tjur</i>	an old bull
c. <i>tyren</i>	the bull
d. <i>en gammel tyr</i>	an old bull
e. <i>den gamle tyr</i>	the old bull
f. <i>tjuren</i>	the bull
g. <i>den gamla tjuren</i>	the old bull
h. <i>en tjur</i>	a bull

Swe	Dan
✓	
	✓
✓	
✓	
✓	
	✓
	✓
	✓

### A2.

English	Swedish	Danish
a horse	<i>en häst</i>	<i>en hest</i>
a strong horse	<i>en stark häst</i>	<i>en stærk hest</i>
the horse	<i>hästen</i>	<i>hesten</i>
the strong horse	<i>den starke häst</i>	<i>den stærka hesten</i>

**Comments:** In both Swedish and Danish the indefinite article 'a' is *en*. The main difference between the languages comes with the definite article 'the'. When there is no adjective in the phrase, definiteness is shown with an *-en* suffix in both languages. But if there is an adjective, a separate word *den* is used, and the adjective gains an ending: *-e* in Swedish, *-a* in Danish. Also, in the case of Danish, the noun keeps its definite suffix, *den stora hunden*. But in Swedish, it is dropped, *den stor hund*.

Armed with these observations, you can unambiguously identify which language each of the examples come from. At first glance, (a) *en tyr*, (c) *tyren*, (f) *tjuren* and (h) *en tjur* could all be either language, but the other examples follow the distinctive rules concerning the endings, and tell you that *tyr* must be the Swedish word for 'bull', and *tjur* is Danish. The second part of the question simply asks you to apply the rules to two new words.

## (B) Intuitive Inuit

### B1.

ᑕᑲᑲᑲᑲᑲᑲ	ka tuj ji ji u jut
ᐱᑕᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲ	pi taa ru ti qar si ma ni u ni ku
ᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲ	king gul riik hlu tik

L <sup>b</sup> Λ <sup>fb</sup> ∟ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup>	mak piq tu ra li ur si ma vut
Λ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup>	pi qu ja li ang gu ma ni ku
▷ <sup>fb</sup> ∟ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup> ∟ <sup>c</sup> ▷ <sup>c</sup>	u qa li maa ga li u la ur si mang ma ta
Δ <sup>b</sup> ∟ <sup>fb</sup> ∟ <sup>c</sup> Δ <sup>c</sup> Δ <sup>c</sup> ▷ <sup>c</sup>	ik juq tu i vi u ju ni
▷ <sup>e</sup> ∟ <sup>c</sup> ∟ <sup>c</sup> ∟ <sup>c</sup> ∟ <sup>c</sup>	uv va luun niit

- B2. a. ∟<sup>fb</sup>∟<sup>c</sup>∟<sup>fb</sup>  
 b. ∟<sup>c</sup>∟<sup>c</sup>  
 c. ∟<sup>b</sup>∟<sup>b</sup>  
 d. ▷<sup>c</sup>∟<sup>fb</sup>

- B3. a. anorak  
 b. kayak  
 c. Canada  
 d. Alaska

**Explanation.** This problem is essentially a pattern-matching problem, but with some extra spice thrown in. It is typical of Olympiad problems in that some clues are included in the blurb. So, from the first two words shown, *Nunavut* ∟<sup>c</sup>∟<sup>c</sup>▷<sup>c</sup> and *Iqaluit* Δ<sup>fb</sup>∟<sup>c</sup>Δ<sup>c</sup> you should spot a few things: first, there are fewer letters in the Inuktitut, so each symbol must represent more than just a letter: it shouldn't take long to guess that each symbol is a consonant+vowel combination, except the smaller raised symbols, which represent a consonant on its own: you can see that from the fact that both words end in *-t* and both end in <sup>c</sup>. Then look at the symbols for *nu* and *na* in *Nunavut*: it is no coincidence that they are similar. Soon you will notice that the symbols come in one of three orientations, corresponding to vowel a, i or u. The blurb promised that the writing system is very systematic, so it is reasonable to expect that that is a further clue. In the table below, shaded cells indicate the symbols found in the first line of the text. The other ones have to be inferred.

Cons	+a	+i	+u	as final	
G	∟	∟	∟		
J	▷	▷	▷	▷	
K	∟*	∟	∟	∟	* ka can be inferred from qa (= rka ∟ <sup>b</sup> )
L	∟	∟	∟	∟	
HL	∟	∟	∟	∟	hlu is given in the blurb (in 'igloo')
M	∟	∟	∟	∟	
N	∟	∟	∟	∟	
NG	∟	∟	∟	∟	
P	<	∟	>	<	
Q	∟ <sup>b</sup>	∟ <sup>fb</sup>	∟ <sup>fb</sup>	∟ <sup>b</sup>	= rk as mentioned
R	∟	∟	∟	∟	
S	∟	∟	∟	∟	

T	ç	ğ	ğ	ç	
V	ç	ğ	ğ	ç	
vowel	ç	ğ	ğ	ç	These are the symbols for A,I,U with no leading consonant

## (C) Turkish bath time

- C1.** (a) Is your father happy?  
 (b) We say “Come to our city”  
 (c) My friend wants to be(come) a doctor  
 (d) Do they like my poor house?  
 (e) We come from Ankara

- C2.** (a) When I come, they say “Hello”  
 (b) They say (that) you are poor  
 (c) Is your father happy that we come/are coming?  
 (d) Is the city (that) you come from big?  
 (e) The city (where) I am happiest in is Istanbul  
 (f) Although we are poor, we are happy

**Comments.** This is quite a complex question, as there is a lot going on. As the blurb “warns”, Turkish is a highly inflected language, with the additional complexity of “vowel harmony”. So how does it work?

Not all the words in the given data are clearly identifiable, but you can certainly extract some vocabulary and some endings, as follows:

Nouns: *arkadaş* ‘friend’, *şehir* ‘city’, *baba* ‘father’, *ev* ‘house’

Adjectives: *mutlu* ‘happy’, *fakir* ‘poor’, *büyük* ‘big’

Verbs: *sev* ‘like’, *ist* ‘want’, *gel* ‘come’, *ol* ‘be’, *atlı* ‘jump’, *di* ‘say’

Question: *mu/mı*

Endings:

*im/am* ‘my’, *an* ‘your’, *ımız* ‘our’

plural *ler/lar*

*de* ‘in’, *den/dan* ‘from’, *e/a* ‘to’

verb endings *yor* (with noun subject), *yorsun* ‘you’, *yorlar* ‘they’, *yoruz* ‘we’, *mek/mak* ‘to (infinitive)’

The alternations between e.g. *ler* and *lar*, *den* and *dan*, and so on, are examples of the “vowel harmony” hinted at in the blurb. Actually it is much more complex than what is shown here, but in general, endings change so as to “agree” with the vowels in the stem: *arkadaşlar* but *pencereler*. The agreement is not letter for letter, but the vowels form groups, e.g. *e* and *i* go together (so *fakirler*).

And you can see some other patterns, like *n* for ‘you’ (*an* ‘your’, *yorsun* the verb ending), versus *z* for ‘we’.

The second set of examples, described as “a bit different”, tested your ingenuity and linguistic intuition. The verbs all have *iǫi* or *uǫu* inserted in the middle, but no examples of this being translated. In all cases however there was a second verb in the usual form. What you had to guess was that the insert indicates a “subordinate” (non-main) verb, and then you also had to guess what the subordination was: *when, which, that, although*. A bit tough, but not impossible!

## (D) Navajo’s great chain of being

### D1.

- (a) Grammatical. The dog is chasing the baby.
- (b) Ungrammatical. Switch order of first two words. The bee stung the boy.
- (c) Grammatical. The cat is chasing the sheep.
- (d) Grammatical. The spider bit the mouse.
- (e) Ungrammatical. Switch order of first two words. The man killed the ant. Or:  
Switch order of first two words and change *yiisxí* to *biisxí*. The ant killed the man.

**D2.** The cat killed the X. [X should be a small animal or bird on the same level as cat, turkey, sheep; *gah* actually means ‘rabbit’.]

**D3.** verb final; prefix *y-* for ‘active’ sentences (with word order SOV), prefix *b-* for ‘passive’ (OSV)

the first of two nouns must be ‘superior’ so ‘active’ is ungrammatical if S is lower in the hierarchy than O; ‘passive’ is ungrammatical if vice versa;

hierarchy is adult > baby = large animal > medium animal > small animal > insect

large animal = bear

small animal = cat, turkey, sheep, whatever *gah* is

smaller animal = gopher, mouse?

insect = ant, bee, spider

Actually you can’t be sure where in the hierarchy mouse is, only that it is above insect (get a point for this observation)

And yes we realize spiders aren’t insects.