Attention all Middle and High School Students!

**What?**
2014 North American Computational Linguistics Olympiad

**When?**
January 30, 2014 from 10:00am-1:00pm

**Where?**
Stony Brook University
Student Activities Center room 302

**Our Website:**
http://www.stonybrook.edu/cesame/teachers/Competitions/NACLO/NACLO.html

**Why?**
Try deciphering an ancient script or deducing the logical patterns of Swahili, Hawaiian or Finite State Transducers!

Compete for a chance to go to the International competition and compete against students from all over the world!

No Experience Necessary!
Participation is free!

For more information visit our website OR http://www.naclo.cs.cmu.edu/
To register visit http://www.naclo.cs.cmu.edu/reg_student.php

Test Prep Session: Sunday, January 12, 2014 11:00 a.m. - 1:00 p.m. at Stony Brook University

Check out the problem on the reverse and more on the website:
http://www.naclo.cs.cmu.edu
Real Money

Languages often have special systems for counting specific sorts of objects – and money is no exception!

Speakers of Cuzco Quechua, a widely-spoken indigenous language of Peru, employed a money-counting system still based on the old colonial Spanish and Peruvian coins the real and the medio (worth half a real). Although Peru hasn’t issued a coin based on the real in almost 150 years – the current Peruvian currency, the nuevo sol (notated S/), divides not into reales but into 100 céntimos – the counting system depicted below was still in use in recent times.

L1 (8 points). The following is a conversation between a shopkeeper (qhatuq) and a series of customers about the price of various tubers. Knowing that the prices of potatoes, cassavas, and ocas at this market are S/ 0.05, S/ 0.10, and S/ 0.15 each (but not knowing which costs which), fill in the missing questions and answers. We’ve translated the first question as a guide.

Q: ¿Hayk’apaqmi huh lumu, huh papa, kinsa uqa ima?
(“How much for one cassava, one potato, and three ocas?”)
A: Pisqaralpaqmi.

Q. ¿Hayk’apaqmi iskay papa, huh lumu ima?
A. Iskaral miyunpaqmi.

Q. ¿Hayk’apaqmi suqta papa?
A. Kinsaralpaqmi.

Q. ¿Hayk’apaqmi iskay lumu, iskay uqa, huh papa ima?
A. Pisqaral miyunpaqmi.

Q. ¿Hayk’apaqmi pisqa uqa, kinsa papa ima?
A. Suqtaral miyunpaqmi.

Q. ¿Hayk’apaqmi suqta uqa?
A. ________________________________

Q. ¿Hayk’apaqmi iskay lumu, huh papa ima?
A. ________________________________

Q. ________________________________
A. Miyunpaqmi.

Historical footnote: eight Spanish reales made up a peso de a ocho or real de a ocho. In English these were known as "pieces of eight" or "Spanish doubloons", and in parrot talk as "Awk! Pieces of Eight! Awk!".

L2 (7 points). Explain your answer.

Stumped? Check out the solution at www.naclo.cs.cmu.edu/problems2010/LS.pdf

1 Historical footnote: eight Spanish reales made up a peso de a ocho or real de a ocho. In English these were known as "pieces of eight" or "Spanish doubloons", and in parrot talk as "Awk! Pieces of Eight! Awk!".

2 Potatoes were first domesticated in South America, and the Quechua people have cultivated hundreds of species (and thousands of varieties) of potatoes and other tubers.