

en(A)

Thirteenth International Olympiad in Linguistics

Blagoevgrad (Bulgaria), 20–24 July 2015

Individual Contest Problems

Do not copy the statements of the problems. Write down your solution to each problem on a separate sheet or sheets. On each sheet indicate the number of the problem, the number of your seat and your surname. Otherwise your work may be mislaid or misattributed.

Your answers must be well-supported by argument. Even a perfectly correct answer will be given a low score unless accompanied by an explanation.

Problem 1 (20 points). Nahuatl:

$$mahtlactli-on-cë \times mahtlactli = mäcuil-pöhualli-om-mahtlactli \quad (1)$$

$$cem-pöhualli \times öme = öm-pöhualli \quad (2)$$

$$yë-pöhualli-on-chicöme + mahtlactli-on-nähui = näuh-pöhualli-on-cë \quad (3)$$

$$mäcuilli + öme = chicöme \quad (4)$$

$$mahtlactli-om-ëyi \times ëyi = cem-pöhualli-on-caxtölli-on-nähui \quad (5)$$

$$mäcuilli \times ëyi = caxtölli \quad (6)$$

Arammba:

$$\text{ngámbi} + \text{ngámbi} = \text{ngámbi} \times \text{yànparo} \quad (7)$$

$$\text{ngámbi} + \text{asàr} = \text{tambaroy} \quad (8)$$

$$\text{yànparo} \, \text{tàxwo} + \text{fete} \, \text{asàr} \, \text{tàxwo} = \text{yànparo} \, \text{fete} \quad (9)$$

$$\text{yenówe} \times \text{yenówe} \, \text{tàxwo} = \text{fete} \, \text{yenówe} \, \text{tàxwo} \quad (10)$$

$$\text{nimbo} \times \text{fete} = \text{tarumba} \quad (11)$$

$$\text{nimbo} + \text{yànparo} \, \text{tàxwo} = \text{yenówe} \, \text{tàxwo} \quad (12)$$

Nahuatl:

Arammba:

$$yë-tzontli-on-näuh-pöhualli-on-caxtölli-on-cë = \text{ndamno} \quad (13)$$

$$cen-tzontli-on-cem-pöhualli-om-mahtlactli-om-öme = \text{yànparo tarumba} \quad (14)$$

$$cen-tzontli = \text{tarumba tambaroy fete asàr} \quad (15)$$

$$cen-xiquipilli = \text{weremeke tarumba nimbo} \, \text{yànparo} \quad (16)$$

(a) Write the equalities (1–12) and the numbers (13–16) in numerals.

(b) Write out in Nahuatl: 42; 494.

(c) Write out in Arammba: 43; 569.

⚠ Classical Nahuatl, of the Uto–Aztecan family, was the language of the Aztec Empire in Mexico.

The Arammba language (also called Serki, Serkisetavi, or Upper Morehead) belongs to the South-Central Papuan family. It is spoken by approx. 970 people in Papua New Guinea.

—Milena Veneva