

My favourite problems

Below you can find some equations and inequalities written in the names of Basque and reconstructed Iberian numbers. Linguists were astonished to encounter some striking similarities between these two languages. In the following the Basque names are mixed together with the Iberian reconstructions.

The spelling of the Iberian names is based on Eduardo Orduña's research.[citation]

$$orkeibarban = hogeita lau + sisbi \quad (1)$$

$$abarsei = lau^{bi} \quad (2)$$

$$hamabi + laur = hamasei \quad (3)$$

$$hogeia = irur \times sisbi - bat \quad (4)$$

$$hiru \times irur + ban = bi \times borste \quad (5)$$

$$laur \times bost = orkei \quad (6)$$

$$orkei - hamar = hiru + zazpi \quad (7)$$

$$abarkebi + hiru = hamabost \quad (8)$$

$$borste < zazpi \quad (9)$$

(a) Rewrite the equations from 1 to 9 in numerals.

(b) Match in pairs the corresponding names of numbers from the set $\{1, 2, \dots, 7, 10, 20\}$. One number has just one form for both languages.

△ Iberian belonged to an unclassified language family, was spoken on the Mediterranean coast of the Iberian Peninsula and became extinct around 1st–2nd century AD.

Basque is considered to be a language isolate. It is spoken in the Basque Country in the north of Spain and the south of France by approx. 750 000 native speakers (2016).

Note that **ř** and **r** as well as **ś** and **s** should be treated as two distinct consonants.
—Michał Boroń

Another problem

This very hard problem does have a name. Yet, it doesn't have an author.

(a) This is the first task.

△ This is my favourite language spoken in X by Y speakers.